REPUBLIC OF INDONESIA

Strengthening Community Resilience and Sustainable Economic Development in Rural Indonesia (SEHATI)

P515935

Environmental and Social Management Framework (ESMF)

DRAFT

October 2026

Document status	Second working draft for project and Indonesian legal/technical review
Purpose	• Providing a proactive planning tool that ensures environmental and social safeguards are built directly into the DNA of Strengthening Community Resilience and Sustainable Economic Development in Rural Indonesia (SEHATI) Project from design through implementation. • Procedure to the SEHATI operating context that includes Community Health and Safety (CHS), Sexual Exploitation and abuse/sexual harassment (SEA/SH), Indigenous Peoples Planning Framework (IPPF), Free Prior and Informed Consent (FPIC), Cultural Heritage (CH) identification/screening, Land Access Procedure, Grievance Redress Mechanism (GRM), simplified environmental and social risks at the village level, and Biodiversity Screening Procedure.

Abbreviations & Acronyms

Abbreviation / Acronym	Full Form and Explanation
AGP	Aktivitas Hijau Pangan / Green Agroprocessing (SEHATI productive sector)
AKP	Aquaculture and Fisheries (Akuakultur dan Perikanan — SEHATI productive sector)
AMAN	Aliansi Masyarakat Adat Nusantara (Indigenous Peoples Alliance of the Archipelago)
AMDAL	Analisis Mengenai Dampak Lingkungan (Environmental Impact Assessment, Indonesia's equivalent of full EIA under GR No. 22/2021)
AWPB	Annual Work Plan and Budget
B3	Bahan Berbahaya dan Beracun (hazardous and toxic substances; B3 waste is hazardous and toxic waste)
Bappenas	Badan Perencanaan Pembangunan Nasional (National Development Planning Agency / Ministry of National Development Planning)
BKSDA	Balai Konservasi Sumber Daya Alam (Natural Resources Conservation Agency, the provincial conservation authority under the Ministry of Forestry)
BMKG	Badan Meteorologi, Klimatologi, dan Geofisika (Meteorology, Climatology, and Geophysics Agency)
BMP	Biodiversity Management Plan (required for biodiversity Category C activities; Annex V)
BNPB	Badan Nasional Penanggulangan Bencana (National Disaster Management Agency)
BOD	Biochemical Oxygen Demand
BPBD	Badan Penanggulangan Bencana Daerah (Regional Disaster Management Agency)
BPCB	Balai Pelestarian Cagar Budaya (Regional Cultural Heritage Preservation Center, under Kemendikbud)
BPD	Badan Permusyawaratan Desa (Village Consultative Body)
BPLH	Badan Pengendalian Lingkungan Hidup (Environmental Control Agency; its Head is also the Minister of Environment)
BPN	Badan Pertanahan Nasional (National Land Agency)
BPPD	Badan Pengembangan dan Pemberdayaan Desa (Directorate of Village Development and Empowerment, under MoVDA)
BPS	Badan Pusat Statistik (Statistics Indonesia)
BPSDM	Badan Pengembangan Sumber Daya Manusia (Human Resource Development Agency, under MoVDA)
BRIN	Badan Riset dan Inovasi Nasional (National Research and Innovation Agency)
BRWA	Badan Registrasi Wilayah Adat (Ancestral Domain Registration Agency)
BSP	Biodiversity Screening Procedure (Annex V)
BUM Desa	Badan Usaha Milik Desa (Village-Owned Enterprise)
BWS/BBWS	Balai Wilayah Sungai / Balai Besar Wilayah Sungai (River Basin Organization, under the Ministry of Public Works)
C1	Component 1 — Productive and Climate-Resilient Village Infrastructure (US$405 million)
C2	Component 2 — Village Economic Opportunities and Institutional Strengthening (US$172.5 million)
C3	Component 3 — Project Management, Monitoring and Evaluation, and Learning (US$22.5 million)
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora

Abbreviation / Acronym	Full Form and Explanation
CPIU	Central Project Implementation Unit (unit at MoVDA and MoHA responsible for sector-specific E&S oversight)
CPMU	Central Project Management Unit (overall project management unit at MoVDA)
DCT	District Coordination Team
DED	Detailed Engineering Design
Desa	Village (the basic administrative unit under Law No. 6/2014)
Ditjen	Direktorat Jenderal (Directorate General)
Ditjen Bangda	Direktorat Jenderal Bina Pembangunan Daerah (Directorate General of Regional Development, under MoHA)
Ditjen PDP	Direktorat Jenderal Pembangunan dan Pemberdayaan Masyarakat Desa (Directorate General of Village Community Development and Empowerment, under MoVDA)
Ditjen PPEI	Direktorat Jenderal Pengembangan Produk Ekspor dan Investasi (Directorate General of Export Product Development and Investment, under MoVDA)
DLH	Dinas Lingkungan Hidup (District or Provincial Environment Agency)
DLHK	Dinas Lingkungan Hidup dan Kehutanan (District/Provincial Environment and Forestry Agency)
E&S	Environmental and Social
EHS	Environmental, Health, and Safety (World Bank Group EHS Guidelines)
EKO	Ecotourism / Green Ecotourism (Ekowisata Hijau — SEHATI productive sector)
ESCOP	Environmental and Social Code of Practice (Annex III)
ESCP	Environmental and Social Commitment Plan (legally binding Borrower commitments under the World Bank ESF)
ESF	Environmental and Social Framework (World Bank, 2018)
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan (site-specific instrument prepared for activities with moderate to substantial E&S risk)
ESS	Environmental and Social Standard (World Bank ESF; ESS1 through ESS10, ESS9 not applicable to SEHATI)
FIFO/FEFO	First In, First Out / First Expired, First Out (stock rotation)
FPIC	Free, Prior, and Informed Consent (required under ESS7 before activities affecting Masyarakat Adat)
GBV	Gender-Based Violence
GR	Government Regulation (Peraturan Pemerintah, PP)
GRM	Grievance Redress Mechanism
GWP	Global Warming Potential
HCFC	Hydrochlorofluorocarbon (ozone-depleting refrigerant)
HFC	Hydrofluorocarbon (refrigerant with high global warming potential)
HPAI	Highly Pathogenic Avian Influenza
IBRD	International Bank for Reconstruction and Development (World Bank lending arm providing the US$600 million loan for SEHATI)
IDR	Indonesian Rupiah
IFC	International Finance Corporation
IPM	Integrated Pest Management

Abbreviation / Acronym	Full Form and Explanation
IPP	Indigenous Peoples Plan (site-specific plan prepared when Masyarakat Adat are present in a subproject area)
IPPF	Indigenous Peoples Planning Framework (framework document for identifying and engaging Masyarakat Adat, serving as the basis for IPPs)
ISPU	Indeks Standar Pencemar Udara (Air Pollution Standard Index)
ITE Law	Law No. 11/2008 on Electronic Information and Transactions, as amended (Undang-Undang Informasi dan Transaksi Elektronik)
IUCN	International Union for Conservation of Nature
Kades	Kepala Desa (Village Head)
Kemendagri	Kementerian Dalam Negeri (Ministry of Home Affairs — MoHA)
Kemendes PDT	Kementerian Desa dan Pembangunan Daerah Tertinggal (Ministry of Villages and Development of Disadvantaged Regions — MoVDA)
Kemendikbud	Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi (Ministry of Education, Culture, Research, and Technology)
KHG	Kesatuan Hidrologis Gambut (Peat Hydrological Unit)
KKP	Kementerian Kelautan dan Perikanan (Ministry of Marine Affairs and Fisheries)
KKPRL	Kesesuaian Kegiatan Pemanfaatan Ruang Laut (Marine Spatial Use Conformity, required for structures and activities in coastal and marine waters)
KLHS	Kajian Lingkungan Hidup Strategis (Strategic Environmental Assessment)
KRISNA	Kolaborasi Perencanaan dan Informasi Kinerja Anggaran (the Government's online planning and budgeting system, used to submit and screen SEHATI village investment proposals)
KTP	Food Security (Ketahanan Pangan — SEHATI productive sector)
LAP	Land Access Procedure (Annex VI; governs land access for Project infrastructure, including the voluntary land donation protocol)
SP4N-LAPOR!	Sistem Pengelolaan Pengaduan Pelayanan Publik Nasional (SP4N) (National Public Service Grievance Management System) - Layanan Aspirasi dan Pengaduan Online Rakyat (National Online Complaint and Aspiration Service, managed by Ombudsman RI — Tier 3 GRM channel)
LMP	Labor Management Procedure (instrument governing all worker categories, OHS, child/forced labor, wages, Code of Conduct, and worker GRM)
M&E	Monitoring and Evaluation
MHPP	Micro Hydro Power Plant
MIS	Management Information System
MMAF	Ministry of Marine Affairs and Fisheries (Kementerian Kelautan dan Perikanan — KKP)
MoA	Ministry of Agriculture (Kementerian Pertanian)
MoE	Ministry of Environment (Kementerian Lingkungan Hidup); "MoE Regulation" and "MoE Decree" mean a Regulation or Decree of the Minister of Environment
MoE/BPLH	Minister of Environment/Head of the Environmental Control Agency (joint Regulation: Peraturan Menteri Lingkungan Hidup/Kepala Badan Pengendalian Lingkungan Hidup)
MoEF	Ministry of Environment and Forestry (KLHK, until 2024); its regulations remain in force unless replaced
MoEMR	Ministry of Energy and Mineral Resources (Kementerian Energi dan Sumber Daya Mineral — ESDM)
MoF	Ministry of Finance (Kementerian Keuangan — oversees Village Fund transfers under SEHATI)

Abbreviation / Acronym	Full Form and Explanation
MoH	Ministry of Health (Kementerian Kesehatan)
MoHA	Ministry of Home Affairs (Kemendagri — co-implementing agency for SEHATI)
MoVDA	Ministry of Villages and Development of Disadvantaged Regions (Kemendes PDT — executing agency for SEHATI)
MPWH	Ministry of Public Works and Housing (Kementerian Pekerjaan Umum dan Perumahan Rakyat — PUPR); its regulations remain in force under the Ministry of Public Works
MSME	Micro, Small, and Medium Enterprises
Musdes	Musyawarah Desa (Village Consultative Meeting)
Musyawarah	Traditional Indonesian deliberative consultation process used for village decision-making and stakeholder engagement
NGO	Non-Governmental Organization
NIMBY	"Not in my backyard" (local opposition to the siting of a facility)
O&M	Operation and Maintenance
ODS	Ozone-Depleting Substances
OHS	Occupational Health and Safety
PAD	Project Appraisal Document (World Bank document formalizing SEHATI project design and implementation arrangements)
PAMSIMAS	Penyediaan Air Minum dan Sanitasi Berbasis Masyarakat (Community-Based Drinking Water Supply and Sanitation Program)
PDAM	Perusahaan Daerah Air Minum (regional drinking-water utility)
PDO	Project Development Objective
Perda	Peraturan Daerah (Regional/District Regulation)
Perdes	Peraturan Desa (Village Regulation)
PIU	Project Implementation Unit (unit at each implementing directorate responsible for sector-specific implementation)
PKKPR	Persetujuan Kesesuaian Kegiatan Pemanfaatan Ruang (Spatial Use Conformity Approval; PKKPR Laut for marine space)
PKTD	Padat Karya Tunai Desa (Village Cash-for-Work)
PLTS	Pembangkit Listrik Tenaga Surya (solar power plant, including off-grid solar PV)
POM	Project Operations Manual
Posyandu	Pos Pelayanan Terpadu (village integrated health post)
PPE	Personal Protective Equipment
PTR	Livestock (Peternakan — SEHATI productive sector)
PUIL	Persyaratan Umum Instalasi Listrik (General Requirements for Electrical Installations)
Puskesmas	Pusat Kesehatan Masyarakat (Community Health Center)
Puskeswan	Pusat Kesehatan Hewan (Animal Health Center)
RAB	Rencana Anggaran Biaya (cost estimate and budget attached to a village proposal)
RPJMD	Rencana Pembangunan Jangka Menengah Daerah (Regional Medium-Term Development Plan)
RPJMN	Rencana Pembangunan Jangka Menengah Nasional (National Medium-Term Development Plan, 2025–2029)
RTRW	Rencana Tata Ruang Wilayah (Regional Spatial Plan)

Abbreviation / Acronym	Full Form and Explanation
SDGs	Sustainable Development Goals (United Nations, 2030 Agenda)
SDS	Safety Data Sheet
SEA/SH	Sexual Exploitation and Abuse / Sexual Harassment
SEF	Stakeholder Engagement Framework (SEHATI instrument under ESS10 covering engagement strategy, disclosure, and GRM)
SEHATI	Strengthening Food Security and Green Economy Development in Indonesian Villages (Memperkuat Ketahanan Pangan dan Pengembangan Ekonomi Hijau di Desa-desa Indonesia — World Bank Project P515935)
SIH	Standar Industri Hijau (Green Industry Standard)
SIPEMANDU	Sistem Informasi Pengelolaan Pengaduan (MoVDA's digital grievance management system — Tier 3 GRM channel for SEHATI)
SLO	Sertifikat Laik Operasi (Operation Feasibility Certificate)
SNI	Standar Nasional Indonesia (Indonesian National Standard)
SPPL	Surat Pernyataan Kesanggupan Pengelolaan dan Pemantauan Lingkungan Hidup (Statement of Environmental Management and Monitoring Capability — environmental instrument for low-risk activities under GR No. 22/2021)
SVLK	Sistem Verifikasi Legalitas dan Kelestarian (Timber Legality and Sustainability Verification System)
TOR	Terms of Reference
TPA	Tempat Pemrosesan Akhir (final waste disposal site / district landfill)
TPK	Tim Pelaksana Kegiatan (Village Implementation Team)
TPS	Tempat Penampungan Sementara (temporary waste collection point)
TPS3R	Tempat Pengolahan Sampah Reduce-Reuse-Recycle (community waste processing facility based on the 3R principle)
UKL-UPL	Upaya Pengelolaan Lingkungan Hidup dan Upaya Pemantauan Lingkungan Hidup (Environmental Management and Monitoring Effort — mid-tier environmental instrument for activities below AMDAL threshold under GR No. 22/2021)
VLD	Voluntary Land Donation
WHO	World Health Organization
WWTP	Wastewater Treatment Plant

Note: Indonesian regulations are cited in the text in short form, using the abbreviations above for the type of instrument and the issuing ministry (e.g., GR No. 22/2021, MoEF Regulation No. 4/2021). Full titles are given in Table 2 (Section 3.1.2).

Executive Summary

Environmental and Social Management Framework (ESMF)

SEHATI Project — Strengthening Food Security and Green Economy Development in Indonesian Villages

World Bank Project ID	P515935
Borrower	Republic of Indonesia
Executing Agency	Ministry of Villages and Development of Disadvantaged Regions (MoVDA / Kemendes PDT)
Co-Implementing Agency	Ministry of Home Affairs (MoHA / Kemendagri)
Total Project Cost	US$600 million (IBRD Loan)
Project Period	2027 – 2032 (5 years)
Target Coverage	The 6,085-entry longlist will be screened to target approx. 5,000 villages across 14 Provinces | ~20 million beneficiaries
E&S Risk Category	Substantial (based on World Bank's team assessment in March 2026)
ESMF Version	October 2026

1. Project Background and Description

The SEHATI Project supports the Government of Indonesia's rural economic transformation by financing productive and climate-resilient infrastructure and institutional strengthening in The 6,085-entry longlist will be screened to target approx. 5,000 villages across 14 provinces. Implemented through the Ministry of Villages and Development of Disadvantaged Regions (MoVDA) with co-implementation by MoHA, SEHATI operates through three components:

Component 1 — Productive & Climate-Resilient Infrastructure (US$405M)

- Village infrastructure for five productive sectors: Green Agroprocessing (AGP), Aquaculture & Fisheries (AKP), Green Ecotourism (EKO), Food Security (KTP), and Livestock (PTR), plus shared cross-sector infrastructure (roads, water, sanitation, digital connectivity).

Component 2 — Economic Opportunities & Institutional Strengthening (US$172.5M)

- Technical assistance, capacity building, value chain development, market linkage, gender mainstreaming, social inclusion, and climate adaptation for village governments and BUM Desa.

Component 3 — Project Management, M&E, and Learning (US$22.5M)

- CPMU at MoVDA; two CPIUs (MoVDA and MoHA); seven PIUs across implementing directorates; MoF PIU. Covers project management, monitoring, knowledge management, and E&S oversight.

Indicative Activities

- 113 indicative activities across five sectors, ranging from low-risk water supply improvements to substantial-risk agroprocessing facility construction. All activities are subject to mandatory E&S screening before approval.

2. E&S Risk Classification and ESMF Purpose

The environmental and social (E&S) risk of SEHATI is categorized as Substantial based on the World Bank's assessment conducted in March 2026. The Substantial risk is attributed to the project's large geographic coverage across approximately The 6,085-entry longlist will be screened to target approx. 5,000 villages, diversity of productive sectors, potential presence of Masyarakat Adat (Indigenous Peoples meeting criteria of ESS7), multi-level governance complexity, varying institutional capacity across participating villages and districts to assess and manage E&S risks, and the nature of civil works and productive activities at village level.

The ESMF is one of the primary instruments for managing the E&S risks relevant for the Project. It establishes the E&S risks screening process for five thematic packages; suggests relevant mitigation measures across all eligible investments of SEHATI in accordance with the applicable World Bank ESS standards, national regulatory frameworks (e.g., regulations, protocols, technical guidelines, etc.) and best management practices; specifies institutional roles and responsibilities; and serves as the basis for the suite of sub-instruments: LMP, LAP, IPPF, Cultural Heritage Procedures, and SEF.

3. Key E&S Risks

Key E&S risks of SEHATI based on World Bank's Environmental and Social Framework (ESF) are listed below:

World Bank ESS	Key Risks	Primary Instruments
ESS1 — Assessment and Management of Environmental and Social Risks and Impacts	Inadequate village-level E&S screening capacity; cumulative impacts from simultaneous investments in multiple villages; weak monitoring.	ESMF; ESCP; UKL-UPL/SPPL; E&S Screening Checklist
ESS2 — Labor and Working Conditions	OHS risks in civil works, agroprocessing, and operation of productive equipment; child and forced labor risks, including among primary suppliers where relevant; inadequate wages; SEA/SH risks associated with project workers; and inconsistent implementation of labor requirements across participating locations.	Labor Management Procedure (LMP); OHS Procedures; Code of Conduct; and Workers' Grievance Mechanism.
ESS3 — Resource Efficiency and Pollution Prevention and Management	Water and energy consumption; Sourcing of construction materials; Wastewater from processing facilities; Pesticide/fertilizer; Runoff; Aquaculture effluents; Solid waste; Hazardous and toxic waste; Hazardous Materials; Electronic waste; Air pollution; Dust; and Noise	ESCOP, ESMP; IPM Guidelines
ESS4 — Community Health and Safety	Construction accidents; SEA/SH from worker influx; disease vectors; road safety; hazardous material exposure.	ESMP; SEA/SH Response Protocol; Traffic Management Plan; GRM
ESS5 — Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Land access requirements for village infrastructure and facilities; risks of coercion in or inadequate documentation in voluntary land-use arrangements; impacts on land users, non-land assets or livelihoods; temporary access restriction; and challenges related to informal/customary tenure.	Land Access Procedure (LAP); land due diligence screening and documentation; Voluntary land-use arrangement.

World Bank ESS	Key Risks	Primary Instruments
ESS6 — Biodiversity Conservation and Sustainable Management of Living Natural Resources	Habitat degradation near sensitive areas; fisheries overexploitation; invasive species; mangrove clearing.	ESMP, ESCOP, Biodiversity Screening Procedure
ESS7 — Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Potential presence of *Masyarakat Adat* (meeting the ESS7 criteria); culturally inappropriate consultation and participation; exclusion from benefits; impacts on customary lands; inadequate FPIC where required as per ESS7.	IPPF; ESS7 screening integrated into village proposal; site-specific measures; and FPIC, where required.
ESS8 — Cultural Heritage	Damage to tangible heritage during construction or rehabilitation works; chance finds; disruption to intangible heritage, traditional practice, or culturally significant sites associated with Project activities.	Cultural Heritage Procedures; Chance Find Protocol
ESS10 — Stakeholder Engagement and Information Disclosure	Inadequate information disclosure; insufficient stakeholder participation in village investment planning and decision making; exclusion of women, youth, IPs, persons with disabilities, and other vulnerable groups; language and accessibility barriers; ineffective GRM.	SEF; Project GRM (utilizing SIPEMANDU and SP4N-LAPOR!, also village and district-level intake arrangements); Information Disclosure Procedures

4. Management Instruments and Institutional Arrangements

E&S Management Instruments

- **ESCP:** Time-bound legally binding Borrower commitments covering all ESS actions, monitoring, and incident reporting.
- **LMP:** OHS standards, child/forced labor prohibitions, minimum wage, non-discrimination, anti-SEA/SH, and worker GRM for all worker categories.
- **LAP:** Land access screening, due diligence for eligible land arrangements, safeguards against coercion, management of temporary access restrictions and minor impacts on assets or livelihoods, and associated documentation and monitoring requirements.
- **IPPF:** Framework for Masyarakat Adat identification, FPIC process, site-specific IPP preparation, and benefit-sharing.
- **SEF:** Differentiated engagement strategy for all stakeholder groups, information disclosure plan, and multi-tier GRM.
- **Cultural Heritage Procedures:** Heritage screening, Chance Find Protocol for civil works, and intangible heritage protection in ecotourism.
- **E&S Screening and Monitoring integrated into KRISNA:** the system will

Institutional Responsibilities

- **CPMU / MoVDA:** Overall E&S coordination; dedicated E&S Specialists; ESCP compliance; consolidated monitoring reports; project incident reporting.
- **CPIUs (MoVDA & MoHA):** Sectoral E&S oversight; review and approval of village-level ESMPs; provincial and district coordination.
- **PIUs (7 Directorates + MoF):** Sector-specific E&S supervision; integration of E&S conditions into procurement and contracts.
- **District Coordination Teams:** First-tier E&S supervision; E&S screening review; coordination with DLHK for environmental permits; first-tier GRM management.
- **Village Governments:** Primary implementation responsibility; E&S screening checklist; community consultation; village-level GRM.
- **Contractors:** ESMP implementation; OHS Plan; Code of Conduct; Chance Find Protocol compliance.

E&S Screening Process (7 Steps)

- **Step 1–2:** Proposal through KRISNA, drawn from the 113 indicative activities and agreed in the Musyawarah Desa; exclusion list screening (protected areas, critical habitats; Annex I).
- **Step 3:** E&S screening (Annex II) and biodiversity screening (Annex V); KRISNA assigns the ESCOPs (Annex III) and shows which further instruments are needed: Simple ESMP, SPPL or UKL-UPL (activities requiring AMDAL are excluded); Masyarakat Adat → IPPF/FPIC; land access →

	screen and monitor the investment proposal submitted by the village governments; simple E&S mitigation plans may be prepared where required	LAP; cultural heritage → Annex VIII; SEA/SH risk → Annex X. • **Step 4:** District verification by the DCT; biodiversity Category C activities, and activities where an exclusion may apply, are referred to the CPMU before approval. • **Step 5–7:** Readiness review before disbursement (environmental document, clean and clear land status with no unresolved land disputes under the LAP, and any further instruments in place); implementation of the ESCOPs; monitoring and grievance handling.

5. Stakeholder Engagement and Grievance Redress

Stakeholder Engagement Framework (SEF)	Three-Tier Grievance Redress Mechanism (GRM)
The SEF provides differentiated engagement strategies for five stakeholder categories: government bodies (national to village level), affected communities including Masyarakat Adat, civil society organizations, private sector actors, and development partners. Methods include village-level *musyawarah*, focus group discussions with women and youth, multilingual disclosure through MoVDA website and local media, and participatory monitoring by community representatives. The SEF and the technical guidelines on the Grievance Mechanism must be finalized before Project Effectiveness, and the tiered GRM must be operating before village proposal development and community decision-making begin (ESCP Actions 10.1 and 10.2).	• **Tier 1 — Village:** Village GRM desk; registration within 3 working days; resolution within 15 working days. • **Tier 2 — District:** District Coordination Team; review within 7 working days; resolution within 30 working days. • **Tier 3 — National:** SIPEMANDU (MoVDA digital GRM system) and SP4N-LAPOR! (national Ombudsman hotline); resolution within 60 working days. • **SEA/SH:** Confidential reporting channel through all tiers; survivor-centered response protocol; World Bank Accountability Mechanism available as last resort.

6. ESCP Key Readiness Actions

Action	Commitment	Trigger / Deadline
A	Organizational structure: CPMU in MoVDA with one environmental and one social specialist; E&S Focal Points in the CPIU and PIUs; a CPMU Complaint Handling Focal Point; district E&S focal points trained through a ToT program	*CPMU E&S Specialists no later than the Effective Date; CPIU/PIU E&S Focal Points and the Complaint Handling Focal Point no later than 60 days after effectiveness; maintained throughout implementation*
B	Capacity building: E&S training for the CPMU, CPIU/PIUs, district coordination teams, village facilitators, village governments, contractors, suppliers, BUM Desa and community groups (screening and exclusion, biodiversity screening, Associated Facilities, pollution prevention, OHS, land access, Indigenous Peoples, cultural heritage, SEA/SH, grievances, incidents and reporting)	*All target groups trained before village proposal development; refresher training throughout implementation*
1.1	ESMF, including the LAP, IPPF, Cultural Heritage Procedures and Biodiversity Screening Procedure: prepare, consult, disclose, adopt and implement; screen every village investment; district verification before approval; CPMU quality assurance and spot checks	*Draft disclosed by Appraisal; consulted before Negotiations; finalized, adopted and disclosed before Board Approval; implemented throughout*

Action	Commitment	Trigger / Deadline
1.2	E&S requirements built into the POM, proposal templates, digital proposal and monitoring systems, district verification tools, technical guidelines, training materials, procurement documents and contracts	*Finalized and operational before village proposal development and submission begin*
2.1	Labor Management Procedures (LMP), including OHS, Codes of Conduct with SEA/SH provisions and the worker grievance mechanism	*Draft disclosed by Appraisal; consulted before Negotiations; finalized and disclosed before the Effective Date*
10.1	Stakeholder Engagement Framework (SEF), including information disclosure	*Draft disclosed by Appraisal; consulted before Negotiations; finalized, adopted and disclosed before Effectiveness and before village proposal development begins*
10.2	Project grievance mechanism: village and district tiers linked to SIPEMANDU and SP4N-LAPOR!, with confidential, survivor-centered channels for SEA/SH complaints	*Functioning before village proposal development and community decision-making begin*

The ESCP names these seven Actions as indicators of implementation readiness: the arrangements under them must be in place and operational before village proposal development begins. The table is a summary; the ESCP sets out the full commitments.

7. Conclusion

The SEHATI ESMF provides a comprehensive, adaptive framework for managing the Substantial E&S risks of a large-scale, multi-sectoral village development program across Indonesia. Its integration of pollution prevention, biodiversity conservation, social inclusion, Masyarakat Adat safeguards, and climate-resilient standards ensures that SEHATI's green economy development objectives are achieved in a manner that protects people, communities, and the environment. This Executive Summary is an overview; for full procedures, mitigation measures, monitoring requirements, and annexes, refer to the complete ESMF document.

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1. Introduction

1.1. Scope of ESMF

The **Strengthening Food Security and Green Economy Development in Indonesia's Village (SEHATI)** program—nationally titled *Swasembada Ekonomi Hijau dan Ketahanan Pangan Terintegrasi (SEHATI)*—is a national initiative designed to enhance community resilience and expand sustainable economic opportunities across rural Indonesia. The Project Development Objective (PDO) is to improve community resilience and to increase participation in sustainable economic opportunities in select villages.

The Environmental and Social Management Framework (ESMF) establishes as framework for identifying, assessing, managing, and monitoring environmental and social (E&S) risks and impacts associated with the SEHATI Project. A framework approach is applied because participating villages, specific investment locations, designs, and associated E&S risks and impacts will be identified progressively during Project preparation and implementation. The ESMF establishes the applicable E&S principles, eligibility and exclusion criteria, screening and assessment procedures, proportionate mitigation measures, institutional responsibilities, monitoring and reporting arrangements, and requirements for additional activity-specific E&S measures or documentation where needed. The ESMF serves as the main E&S reference for Project implementation and will inform the preparation and implementation of more detailed operational requirements. Relevant ESMF requirements will be incorporated, as applicable, into the Project Operations Manual (POM), technical guidelines, village investment proposal templates, digital proposal and monitoring systems, district verification tools, training and facilitator materials, procurement and contractual documents, supervision arrangements, and Project monitoring and reporting procedures. These operational tools will support practical application of the ESMF at national, district, and village levels and do not replace technical review by appropriately qualified personnel.

The ESMF will be maintained as a living document throughout Project implementation. It may be updated, as necessary, to reflect changes in Project design or implementation arrangements, applicable regulatory requirements, participating activities, emerging E&S risks and impacts, implementation experience, monitoring findings, stakeholder feedback, or other relevant developments. Any updates will be undertaken and disclosed in accordance with the applicable requirements of the ESCP and the World Bank Environmental and Social Framework (ESF). This ESMF document follows the National Laws applicable in the Republic of Indonesia, and the Environmental and Social Standards (ESSs) of the World Bank ESF.

The SEHATI project's management structure comprises agencies at both the central and regional levels, with roles and responsibilities delegated according to the respective authority of each tier.

The implementing agencies and key stakeholders involved at the central level include:

- Steering Committee: The Steering Committee is the project coordination team at the central level chaired by the Ministry of National Development Planning/Bappenas. It is responsible for setting the policy direction for project management by the Executing Agency, chaired by the Deputy for Regional Development of Bappenas, and composed of Echelon I officials from

each project-executing unit, the Ministry of Villages and Development of Disadvantaged Regions (MoVDA), Ministry of Finance (MoF), and Ministry of Home Affairs (MoHA)

- Executing Agency: The Executing Agency (EA) mandate falls under the Minister of Villages and Development of Disadvantaged Regions, acting through the Secretariat General. The EA framework comprises the Central Project Management Unit (CPMU), Central Project Implementing Unit (CPIU), and Project Implementing Unit (PIU).
- CPMU: the Ministry of Villages and Development of Disadvantaged Regions (MoVDA)
- CPIUs: the Ministry of Villages and Development of Disadvantaged Regions (MoVDA), Ministry of Finance (MoF), Ministry of Home Affairs (MoHA), Financial and Development Supervisory Agency (BPKP), and Sectoral Communication Forum comprising other sectoral ministries/agencies.

At the local level, several key stakeholders involved in the project management includes:

- District governments
- Relevant district agencies who have interests in infrastructure development, livestock, ecotourism, green agroprocessing, food security, and aquaculture sectors.
- Technical coordinating teams appointed by Regents

At the village level, key stakeholders involved in the project implementation at the village level includes:

- Village Governments
- Village Consultative Bodies (*Badan Permusyawaratan Desa*/BPD)
- Village-Owned Enterprises (BUM Desa)
- Village facilitators
- Local producer associations
- Women's groups
- youth groups.

The SEHATI project is strategically designed to operate at a massive scale to drive nationwide rural impact. The project will target approximately **The 6,085-entry longlist will be screened to target approx. 5,000 villages** across selected rural districts, directly benefiting an estimated **20 million people**.

These The 6,085-entry longlist will be screened to target approx. 5,000 villages are selected through a transparent, data-driven methodology that prioritizes "Developed" and "Developing" tier villages located in districts demonstrating strong commitment to fiscal performance and village fund oversight. Additional selection criteria emphasize villages with high population sizes, lower fiscal capacity, medium to high climate vulnerability (based on the government's Climate Vulnerability Index / IRID), the presence of active Village-Owned Enterprises (BUM Desa), and readiness for climate and disaster-informed planning.

Because the villages are selected during implementation, the ESMF does not describe each Project location. Instead, Section 4.8 summarizes the environmental conditions that matter most for screening village investments (agro-ecological setting, natural hazards, water stress and groundwater, air quality, deforestation and land degradation, and forest and land fires) and the data that district teams use to check them for each village.

1.2. Objectives

The ESMF document has at least six objectives (but not limited to):

a) Assess the potential environmental and social risks and impacts of the proposed infrastructure development and activities in SEHATI Project and also propose mitigation measures;
b) Establish procedures for the environmental and social screening, review, approval, and implementation of SEHATI Project activities;
c) Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social issues related to the SEHATI Project activities;
d) Identify the staffing requirements, as well as the training and capacity building needed to successfully implement the provisions of the ESMF;
e) Address mechanisms for public consultation and disclosure of project documents as well as redress of possible grievances;
f) Provide the basis for integrating applicable E&S requirements into the POM, village investment proposal and screening processes, technical guidelines, district verification procedures, procurement and contractual requirements, training materials, and Project monitoring and reporting systems; and
g) Establish the budget requirements for implementation of the ESMF.

1.3. Overview of the E&S Risk Mitigation Framework

E&S risk mitigation in SEHATI is built into the village investment proposal process, so that every activity is screened, assigned proportionate mitigation measures and verified before funds are disbursed. Figure 1 summarizes the process and the steps are described below. Detailed procedures are set out in Chapter 6 and the Annexes.

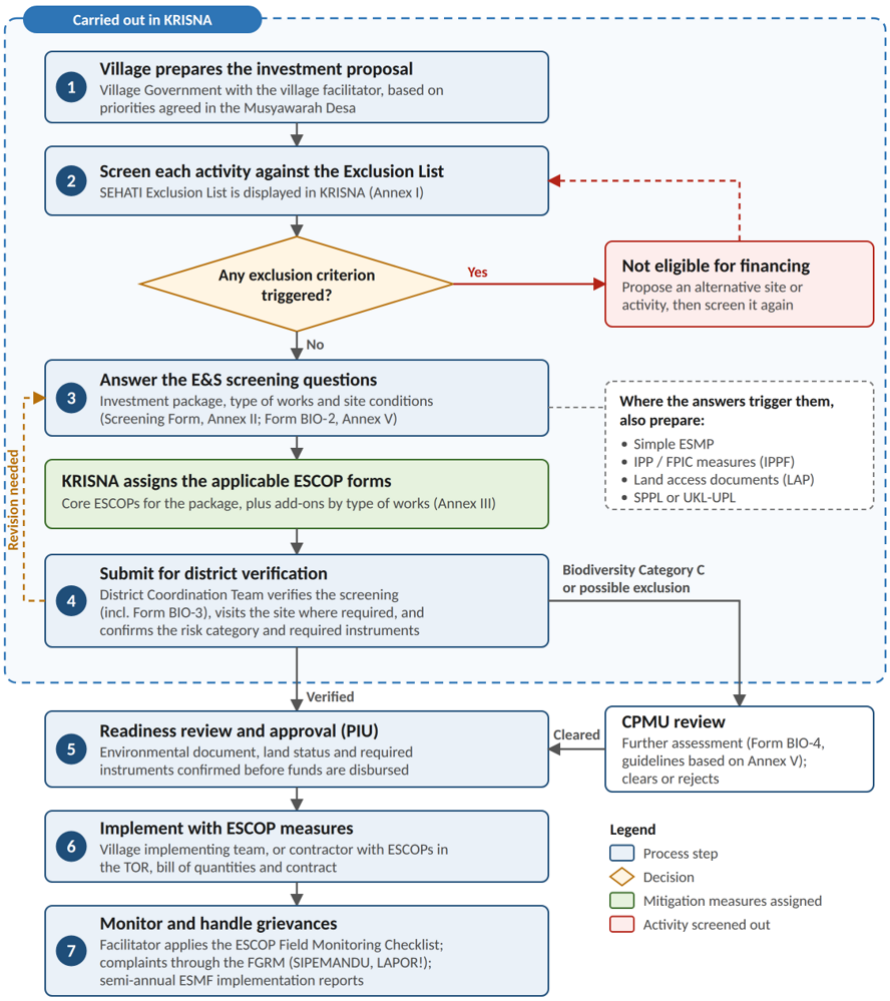

Figure 1. E&S risk mitigation framework of SEHATI

Step 1 – Proposal through KRISNA.

All SEHATI investments must be proposed through KRISNA. The Village Government, supported by the village facilitator, prepares the proposal based on priorities agreed in the Musyawarah Desa.

Step 2 – Exclusion screening.

During proposal entry, KRISNA displays the SEHATI Exclusion List (Annex I), which includes the activities on the IFC Exclusion List, and the village screens each proposed activity against it. An activity that meets any exclusion criterion is not eligible for financing and cannot proceed as proposed. The village may propose an alternative site or activity, which is then screened again.

Step 3 – E&S screening and ESCOP assignment.

For activities that pass the Exclusion List, the village answers a set of screening questions in KRISNA on the investment package, the type of works and the site conditions (E&S Screening Form, Annex II), and completes the biodiversity screening (Form BIO, Part BIO-2, Annex V, starting from the village sensitivity flag that the CPMU records for each village in Part BIO-1 before proposals are prepared). Based on the answers, KRISNA assigns the applicable ESCOP forms (Annex III): ESCOP 1 for all physical works, ESCOP 11 for tools and equipment, the core ESCOP for the package, and additional ESCOPs by

type of works. The answers also show whether further instruments are needed, such as a Simple ESMP (including for activities screened as biodiversity Category B), Indigenous Peoples measures or FPIC under the IPPF, land access documentation under the LAP, or an SPPL or UKL-UPL.

Associated Facilities (AF). Some village investments may depend on a facility that SEHATI does not finance, such as an access road or bridge, a power line, a water intake or pipeline, a quarry or borrow pit, a waste disposal site, a jetty, or a telecommunication tower or backhaul built by an operator. Under ESS1, such a facility is an Associated Facility if:

(a) directly and significantly related to the project; and

(b) carried out, or planned to be carried out, contemporaneously with the project; and

(c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist.

Because village investments will only be identified through the Musyawarah Desa and proposed through KRISNA during implementation, **the Associated Facilities that will be encountered cannot be known nor assessed at this stage of ESMF preparation.** Presence of Associated Facilities will be identified during the screening stage of the proposal. The screening will identify:

- **If suspected facilities meet the criteria of Associated Facilities as per ESS1.** The E&S Screening Form will provide clear criteria and guidance how the village can check if the suspected facilities meet all of the three criteria of Associated Facilities, i.e. point (a), (b), and (c) as above.
- **Identify the facility and who is responsible.** When an Associated Facilities are identified, the E&S Screening Form (Annex II, Section 3) will require the village to provide information, including names the facility, its location and status (existing, under construction or planned), and the party responsible for building, owning and operating it (for example another village, a district or provincial office, a ministry or national program, PLN, a telecommunication operator, a private company or a BUM Desa), together with any environmental document or permit it holds.
- **Inform the right person.** KRISNA notifies the E&S focal point of the District Coordination Team (DCT). The DCT focal point checks the facility with the relevant district technical office (for example public works, environment (DLH), agriculture or fisheries) and advises the village. The DCT focal point then refers every potential Associated Facility to the CPMU E&S Specialists, supported by the PIU E&S focal point, for assessment and determination under ESS1 and this ESMF (ESCP Action 1.5). The determination and any further assessment are completed and recorded in the screening record before the activity is approved, and the activity is screened again if its scope changes.
- **Manage the risks as far as the Project can.** AF risks are managed in proportion to the Project's control or influence over the facility: for example by coordinating with the responsible party, obtaining and reviewing its environmental document or permits, agreeing measures and adding them to the village's instruments, or choosing a design that does not depend on a high-risk facility. Where serious risks cannot be addressed, the activity is redesigned or does not proceed. Biodiversity aspects are screened under Annex V (Table V-4, 13.8; Form BIO, Part BIO-3 check 10). The AFs identified and the action taken are reported in the semi-annual E&S monitoring report (ESCP Action C).

Step 4 – District verification.

The village attaches the ESCOPs and any further instruments to the proposal and budget (RAB) and submits it through KRISNA. The District Coordination Team verifies the screening (Form BIO, Part BIO-

3), visits the site where required, and confirms the risk category and required instruments. Proposals that need revision are returned to the village. Activities screened as biodiversity Category C, or where an exclusion may apply, are referred to the CPMU (Part BIO-4) for further assessment under the technical guidelines based on Annex V (Section 10), with World Bank prior review where required.

Step 5 – Readiness review and approval.

Before funds are disbursed, the PIU confirms that the required environmental document (SPPL or UKL-UPL), clean and clear land status, and any further instruments are in place.

Step 6 – Implementation.

The ESCOP measures are applied during construction and operation. For community-implemented works, the ESCOPs guide the village implementing team. For contractor-implemented works and procurement, they are included in the TOR, bill of quantities and contract as mandatory requirements.

Step 7 – Monitoring and grievance handling.

The village facilitator applies the ESCOP Field Monitoring Checklist at least once during construction and once after the facility starts operating, and reports findings to the PIU for follow-up. Complaints are handled through the SEHATI FGRM (SIPEMANDU and SP4N-LAPOR!), and E&S performance is reported in the semi-annual ESMF implementation reports.

1.4. Outline of the ESMF Document

The Environmental and Social Management Framework (ESMF) document is structured into several main sections, beginning with an Executive Summary and an Introduction. This is followed by the Project Description, and a section detailing the Environmental and Social Policies, Regulations, and Laws. The document then discusses the Environmental and Social Context, along with the Potential Environmental and Social Risk Impacts and Standard Mitigation Measures. Additionally, it covers the Process to Manage Environmental and Social Issues, as well as the Procedures and Implementation Arrangements. Finally, the document concludes with a section on Stakeholder Engagement, Disclosure, and Consultations, followed by the Annexes that provide practical templates and worksheets that can be used by implementing agencies and stakeholders working at the village level.

The ESMF document should be read together with the Environmental and Social Commitment Plan (ESCP), Stakeholder Engagement Framework (SEF), Labor Management Procedure (LMP), Project Operations Manual (POM) and other applicable Project documents. The ESMF also incorporates or provides the framework for specific E&S procedures, including the Indigenous Peoples Planning Framework (IPPF), Land Access Procedures (LAP), cultural heritage and chance-find procedures, pollution prevention and waste-management measures, labor and occupational health and safety requirements, and other procedures applicable to Project-supported activities.

The ESMF provides the framework and reference for these requirements, while more detailed implementation measures will be operationalized, as applicable, through village investment proposals, technical and implementation guidelines, district verification procedures, training materials, procurement and contractual requirements, and monitoring and reporting tools.

2. Project Description

2.1. Project Background

Indonesia's sustained economic growth over the past two decades has contributed to a substantial decline in poverty. Nevertheless, significant urban-rural disparities persist. In 2024, the rural poverty rate remained approximately 11 percent, compared with 6.7 percent in urban areas, with around 13.01 million rural residents living below the poverty line (World Bank, 2025; BPS, 2024). Rural development therefore remains critical to reducing regional inequality and improving community well-being. This priority is reflected in National Priority 6 of the National Medium-Term Development Plan for 2025–2029 (RPJMN 2025–2029), which promotes development from villages and the grassroots to support economic growth, equitable development, and poverty eradication.

Since 2015, the Government of Indonesia has strengthened rural development through the Village Fund (*Dana Desa*), allocating approximately IDR 70–80 trillion annually to support participatory village planning and investments in basic infrastructure and services. These investments have improved rural connectivity and living conditions. However, rural economic transformation continues to be constrained by limited productive investment, inadequate economic infrastructure, institutional capacity gaps, food insecurity, and increasing exposure to climate change.

Indonesia's approximately 75,266 villages play a vital role in national food production and local economic development. However, around 16 percent of areas remain vulnerable to food insecurity, and nearly 16 percent of the population is at risk of food insecurity (National Food Agency, 2023). Agricultural production is also under pressure from land conversion, natural resource degradation, and climate change, which could reduce production by approximately 25 percent by 2045 without appropriate policy responses (Bappenas, 2023). Rural communities are particularly exposed to climate-related hazards: approximately 45 percent of villages are located in areas vulnerable to floods, droughts, strong winds, and other hydrometeorological hazards, while around 39 percent have experienced at least one natural disaster in recent years (BPS, 2024; BPS, 2025).

Green economic development offers an opportunity to address these interconnected challenges by strengthening rural livelihoods, food-system resilience, and environmental sustainability. Sustainable agriculture can improve productivity and resource efficiency, while community-based green tourism can diversify local incomes and support environmental conservation and cultural preservation. Nevertheless, progress remains constrained by limited investment in productive activities, infrastructure, equipment, and local institutional capacity. Over the past five years, only around 6.4 percent of village budgets was allocated to productive sectors and approximately 1.3 percent to productive infrastructure and equipment (World Bank, 2025).

The **Strengthening Food Security and Green Economy Development in Indonesia's Villages Project**, also known as the **Swasembada Ekonomi Hijau dan Ketahanan Pangan Terintegrasi (SEHATI) Project**, is designed to address these challenges through an integrated approach. The Project will support productive village infrastructure, sustainable agricultural practices, stronger village economic

institutions, and environmentally sustainable rural enterprises, including community-based green tourism where appropriate. These interventions are expected to improve rural productivity, expand livelihood and employment opportunities, strengthen food security and climate resilience, and promote environmental sustainability.

Given the nature and geographic coverage of the proposed activities, the Project may generate environmental and social risks and impacts requiring systematic management. This ESMF therefore establishes the principles, procedures, institutional arrangements, and instruments for identifying, assessing, managing, and monitoring such risks and impacts in accordance with applicable Indonesian requirements and the relevant World Bank Environmental and Social Standards.

2.2. Project Objectives

The overall objective of the SEHATI Project is to strengthen rural food security, enhance local economies by building on village-specific potential, and promote sustainable green economic development in rural areas. This will be achieved, among other measures, through the development of environmentally sustainable productive enterprises, the adoption of sustainable agricultural practices, and the promotion of village-based green tourism that harnesses natural assets, cultural heritage, and local knowledge as drivers of economic growth for rural communities.

The specific objectives of the Project are to:

1. **Provide facilities and infrastructure** tailored to specific local needs and challenges to enhance food security, strengthen climate adaptation, promote green tourism, and support the sustainable development of village-level green economies.
2. **Enhance the awareness, knowledge, and active participation of stakeholders** in supporting food security, climate adaptation, green tourism development, and the sustainable advancement of village-level green economies.
3. **Strengthen multi-stakeholder coordination and collaboration**, including engagement with the private sector, to advance food security, climate adaptation, green tourism development, and sustainable village-level green economic development.
4. **Improve governance and strengthen the effectiveness of central and subnational governments** in providing guidance for, and facilitating the implementation of, village-level actions related to food security, climate adaptation, green tourism development, and sustainable village-level green economic development.
5. **Optimize the use of digital technologies** to improve the efficiency of systems for monitoring, reporting, and evaluating both financial performance and the achievement of Project outputs.
6. **Support the accelerated implementation of Priority Rural Areas** associated with food security, climate adaptation, green tourism development, and village-level green economic development at the broader area level.
7. **Strengthen the role of village economic institutions**, including Village-Owned Enterprises (*Badan Usaha Milik Desa*, BUM Desa) and Joint Village-Owned Enterprises (*BUM Desa Bersama*), as well as women's groups and youth groups, in developing green tourism and promoting sustainable village-level green economic development.

2.3. Project Locations

The SEHATI Project targets approximately The 6,085-entry longlist will be screened to target approx. 5,000 villages. However, at the time of finalizing this ESMF document, a definitive list of selected villages eligible for development funding under the project has not yet been established.

Priority locations primarily comprise villages categorized as "advanced" (*desa maju*) and "developing" (*desa berkembang*). Nevertheless, to foster self-reliant villages (*desa mandiri*) through integrated, end-to-end intervention approaches, select self-reliant villages may be designated as role models (model villages). Examples include food-resilient villages, energy-resilient villages, climate-resilient villages, and green tourism villages. These model villages serve as benchmarks for advanced and developing villages in their progression toward becoming integrated, sustainable, and thematic self-reliant villages.

Detailed selection and eligibility criteria for the The 6,085-entry longlist will be screened to target approx. 5,000 villages are elaborated in the *Readiness Criteria* document prepared by the Ministry of Villages and Development of Disadvantaged Regions (MoVDA). Broadly, the selection process comprises mandatory minimum eligibility requirements alongside specific evaluation criteria:

- **Minimum Eligibility Requirements:** These include alignment with project objectives, compliance with designated geographic scope, demonstrated commitment from the district (*kabupaten*) government to support project implementation, and the absence of disqualifying conditions that would render the village ineligible for financing under project regulations. Additionally, complementarity and potential overlaps with other existing programs are screened to ensure that SEHATI funding delivers clear added value and avoids double financing.

- **Evaluation Criteria:**
    1. Economic potential and/or signature local products (*produk unggulan desa*);
    2. Climate vulnerability and risk profile;
    3. Presence and operational readiness of local economic institutions, including Village-Owned Enterprises (*BUM Desa*) and Joint Village-Owned Enterprises (*BUM Desa Bersama*);
    4. Population size and potential beneficiary headcount;
    5. Fiscal capacity and ability to sustain long-term investments;
    6. Connectivity and economic linkages to regional hubs or adjacent villages;
    7. Alignment with broader rural area development strategies; and
    8. Other relevant readiness indicators evaluating the village's institutional capacity to execute and maintain investments.

2.4. Project Components of SEHATI

Table 1. SEHATI Project Components

Component	Title	Summary
Component 1	Climate-Resilient Village Investment	The main activities for component 1 include strengthening village capacity to develop integrated, risk-based, and climate-resilient village investment plans, strengthening institutional monitoring and supervision capacity for resilient village development, and investing in climate-resilient productive infrastructure.
Component 2	Enhancing Economic Opportunities of Village Economic Institutions and Communities	The main activities for component 2 include supporting productive tools and equipment for village economic institutions, women, youth, and vulnerable groups, strengthening capacities and market linkages of village economic institutions, women, youth, and vulnerable groups, and Providing villages with digital connectivity services
Component 3	Project Management, Technical Support, Monitoring, and Learning	The main activities for component 3 include supporting coordination, technical assistance, E&S support, capacity building, monitoring, communications, and learning.

- **Component 1: Climate-Resilient Village Investments (US$405 million IBRD)**

Sub-component 1.1: Strengthening community resilience and preparadness (US$55 million IBRD)

This subcomponent will support the preparation and annual evaluation of three-year, integrated, risk-informed, and gender-responsive village investment plans through facilitator training, participatory planning, and implementation support. The plans will prioritize climate- and disaster-resilient productive infrastructure, tools and equipment, and capacity-building activities tailored to local needs and informed by applicable risk data and technical standards. Potential environmental and social risks include the exclusion of vulnerable groups, elite capture, inequitable distribution of benefits, land-related disputes, inadequate stakeholder engagement, and adverse impacts associated with the location and design of proposed investments. These risks will be addressed through inclusive and transparent planning, meaningful consultation, environmental and social screening, application of mitigation measures, and accessible grievance mechanisms, with particular attention to women, youth, and vulnerable groups. District governments will appraise the plans for technical, economic, climate-resilience, and environmental and social feasibility, as well as alignment with village budgets, government priorities, and applicable national standards.

Sub-component 1.2: Strengthening institutional monitoring and supervision capacity for resilient village development (US$5 million IBRD)

This subcomponent will finance the digital upgrading and harmonization of national village monitoring systems to improve interoperability across planning, budgeting, financial reporting, and infrastructure monitoring platforms. It will enable real-time monitoring of village investments and strengthen information exchange among village, district, and central government institutions. Standard operating procedures and technical guidelines will also be developed to support the supervision, verification, and audit of village investment plans. Potential environmental and social risks include data privacy and cybersecurity breaches, inaccurate or incomplete environmental and social reporting, unequal access due to limited digital connectivity or literacy, and the exclusion of vulnerable groups. These risks will be addressed through appropriate data protection and access controls, system validation and quality assurance, user training and technical support, inclusive and accessible system design, and integration of environmental and social performance indicators into the monitoring systems.

Sub-component 1.3: Investing in climate-resilient productive infrastructure (US$465 million IBRD)

This subcomponent will finance village grants and engineering consultancy services for the technical design, construction, and supervision of eligible investments under approved three-year village investment plans. Grants will be transferred annually to village accounts through the Village Fund transfer system in two tranches, with the second tranche contingent upon verified satisfactory implementation progress. Potential environmental and social risks include land acquisition or access restrictions, occupational and community health and safety hazards, labor-related risks, construction impacts, waste and pollution, impacts on biodiversity and cultural heritage, and inadequate stakeholder engagement. These risks will be managed through subproject screening, preparation and implementation of proportionate environmental and social instruments, meaningful consultation, contractor management, supervision, grievance mechanisms, and compliance monitoring. The Project Operations Manual will specify subproject eligibility and applicable environmental and social requirements, while district governments will oversee implementation and the Ministry of Finance will monitor financial compliance.

- **Component 2: Enhancing Economic Opportunities of Village Economic Institutions and Communities (US$172.5 million IBRD)**

Sub-component 2.1: Strengthening capacities and market linkages of village economic institutions, women, youth, and vulnerable groups (US$32.5 million IBRD)

This subcomponent will strengthen the business viability, productivity, and market access of Village-Owned Enterprises (BUM Desa), women's groups, and youth groups through training, mentoring, and business development services. Support will cover entrepreneurship, financial literacy, e-commerce, digital marketing, and ecotourism, complemented by partnerships with private-sector actors and tourism vocational training programs, where relevant. Potential environmental and social risks may include exclusion of vulnerable groups, unequal access to training and economic opportunities, occupational health and safety risks associated with supported enterprises, risks related to labor and working conditions, digital privacy and cybersecurity concerns, and adverse impacts from tourism-related activities. These risks will be addressed through inclusive and transparent beneficiary selection, accessible and culturally appropriate training, stakeholder engagement, codes of conduct,

grievance mechanisms, and the integration of relevant environmental, social, health, and safety requirements into training materials and business development support.

Sub-component 2.2: Providing villages with digital connectivity services (US$20 million IBRD)

This subcomponent will support the expansion of mobile broadband connectivity in underserved Project villages not covered by existing or planned government interventions. Project support will include digital infrastructure, performance-based managed connectivity services, and digital literacy and skills training, with particular attention to women and youth. Private service providers will design, install, operate, and maintain off-grid or conventional cellular towers, as appropriate. Village governments will make Village Treasury Land available, subject to documented community consultation and consent, while district governments will facilitate the timely issuance of required permits. Potential environmental and social risks include land-use disputes, inadequate consultation or consent, community health and safety hazards, worker health and safety risks, construction-related nuisance and waste, impacts on biodiversity or cultural heritage, visual impacts, exclusion of vulnerable groups, and data privacy and cybersecurity concerns. These risks will be addressed through environmental and social screening, verification of land ownership and voluntary land-use arrangements, meaningful stakeholder engagement, appropriate siting and design, labor and occupational health and safety measures, contractor management, waste management, inclusive access to training, data-protection measures, and accessible grievance mechanisms.

Component 3: Project Management, Technical Support, Monitoring, and Learning (US$22.5 million IBRD)

This component will support overall Project coordination, management, technical assistance, capacity building, knowledge exchange, monitoring and evaluation, and environmental and social risk management at the national and subnational levels. It will finance specialist personnel, operational costs, staff training, communication, audits, peer learning, and analytical studies. Key E&S risks include inadequate institutional capacity, inconsistent application of E&S requirements across implementing agencies, weak coordination and reporting, and insufficient stakeholder engagement. These risks will be managed through qualified E&S staffing, targeted training, clear institutional responsibilities, harmonized procedures, regular monitoring and reporting, and accessible grievance mechanisms.

3. Environmental and Social Policies, Regulations, and Laws

3.1. Indonesia

3.1.1. Institutional Framework

Implementation of the **SEHATI Project** will involve institutions at the national, district, and village levels. Technical consultants, contractors, suppliers, service providers, Village-Owned Enterprises (BUM Desa), community groups, and asset operators will also support Project implementation.

- **At the national level**

Steering Committee

A high-level interministerial Steering Committee, coordinated by Bappenas, will provide strategic direction and policy oversight. Its main responsibilities will include:

- ensuring alignment with Project objectives and national priorities;
- coordinating participating ministries and agencies;
- reviewing Project progress;
- addressing strategic and cross-sectoral issues; and
- directing corrective actions, including those related to significant environmental and social risks.

The Steering Committee will meet at least every six months or as specified in the POM.

Executing Agency and Central Project Management Unit (CPMU)

The **Ministry of Villages and Development of Disadvantaged Regions (MoVDA)** will serve as the Executing Agency and will coordinate with the **Ministry of Home Affairs (MoHA)**, the **Ministry of Finance (MoF)**, the **Ministry of National Development Planning/Bappenas**, and participating subnational governments.

All implementing entities will comply with applicable Indonesian laws and regulations, the World Bank Environmental and Social Framework (ESF), the Environmental and Social Commitment Plan (ESCP), this ESMF, and other relevant Project environmental and social instruments. Detailed roles, reporting arrangements, and implementation procedures will be set out in the Project Operations Manual (POM) and relevant technical guidelines.

MoVDA will act as the Executing Agency through the **Central Project Management Unit (CPMU)**. The CPMU will be responsible for overall Project management, including:

- consolidating annual work plans and budgets;
- coordinating implementing agencies and subnational governments;
- overseeing financial management and procurement;
- monitoring Project implementation and results;
- coordinating technical assistance and capacity building;

- managing Project-level risks; and
- overseeing environmental and social risk management.

The CPMU will have overall responsibility for implementing the ESCP, ESMF, stakeholder engagement instruments, Labor Management Procedures, and other relevant environmental and social instruments. It will ensure that environmental and social requirements are integrated into screening, appraisal, design, procurement, construction, supervision, commissioning, and operation.

Qualified environmental and social specialists will be assigned to the CPMU. They will provide technical support, consolidate monitoring reports, oversee the Project grievance mechanism, follow up corrective actions, and coordinate the reporting of significant incidents to the World Bank.

Central Project Implementation Units

Central Project Implementation Units (CPIUs) will be established within MoVDA and MoHA to coordinate their respective Project Implementation Units (PIUs).

The **MoVDA as CPIU** will consolidate the annual work plans, budgets, and implementation reports of the MoVDA PIUs. It will also coordinate technical matters between the PIUs and the CPMU.

The **MoHA as CPIU** will coordinate the MoHA PIUs and support Project implementation at the district and village levels, particularly in relation to planning, supervision, village governance, and asset management.

Both CPIUs will consolidate environmental and social monitoring information and coordinate corrective actions with the CPMU.

Project Implementation Units within MoVDA

a. Directorate General of Village and Rural Development

This PIU will manage activities related to productive village infrastructure, climate and disaster resilience, and environmentally sustainable infrastructure standards. It will provide technical support, quality assurance, procurement, contract management, monitoring, and supervision.

The PIU will integrate environmental and social requirements into technical designs, bidding documents, contracts, and construction supervision. Key considerations will include land and site readiness, labor conditions, occupational and community health and safety, pollution, waste, biodiversity, cultural heritage, and other construction-related impacts.

b. Directorate General of Village and Disadvantaged Region Economic Development and Investment

This PIU will support BUM Desa, BUM Desa Bersama, women's groups, youth groups, and other village economic institutions. Support may include productive equipment, enterprise development, institutional strengthening, and improved asset utilization.

The PIU will ensure that supported activities and equipment meet relevant environmental, social, health, and safety requirements. It will also promote safe equipment use, transparent beneficiary selection, equitable access to benefits, proper waste management, and adequate operation and maintenance arrangements.

c. Village and Disadvantaged Region Development and Information Agency

This PIU will manage Project information systems, including data integration, dashboards, monitoring records, audit trails, and links with existing government systems.

It will apply appropriate measures for data privacy, cybersecurity, access control, data validation, and quality assurance. Digital systems will support environmental and social monitoring but will not replace formal appraisal, verification, or approval processes.

d. Human Resources Development and Community Empowerment Agency

This PIU will provide training, coaching, technical guidance, and other capacity-building support to facilitators, village institutions, asset operators, and other stakeholders.

Environmental and social requirements will be included in training materials and activities. Relevant subjects will include environmental and social screening, inclusive consultation, labor and working conditions, occupational and community health and safety, grievance management, and monitoring of mitigation measures.

e. Information and Documentation Management Official (PPID)

This PIU will support, manage, and monitor the Grievance Mechanism through existing channel SIPEMANDU.

Project Implementation Units within MoHA

a. Directorate General of Regional Development

This PIU will help align village investment planning with district planning and strengthen district-level supervision and monitoring. It will also prepare relevant regulatory and technical guidance and coordinate with district and municipal governments.

The PIU will support the integration of environmental and social requirements into district-level appraisal, supervision, and monitoring. It will also strengthen district capacity to review environmental and social documents, supervise mitigation measures, and address non-compliance.

b. Directorate General of Village Government Administration

This PIU will support village governance and the management of Project-financed village assets. It will also contribute to district supervision arrangements and the integration of village financial reporting systems.

The PIU will promote transparent asset management, including clear arrangements for ownership, operation, access, maintenance, user fees, cost recovery, benefit sharing, and grievance handling.

Project Implementation Unit within MoF

The **Directorate General of Fiscal Balance** will serve as the MoF PIU. It will establish and implement arrangements for allocating and transferring Project funds to participating villages, in accordance with the final legal and financial management arrangements.

The MoF PIU will monitor financial compliance, reconcile disbursement data, and coordinate financial reporting with MoVDA, MoHA, and Bappenas. Where applicable, the release of financing will take account of compliance with Project eligibility criteria and agreed environmental and social requirements.

- **At the Sub-National Level**

District Governments

District and municipal governments will play a central role in appraising, supervising, and monitoring village investments. Relevant district offices will participate in cross-agency technical teams to assess proposed investments.

Their responsibilities will include:

- reviewing village investment proposals;
- confirming compliance with eligibility and exclusion criteria;
- reviewing environmental and social screening results;
- verifying land status and site readiness;
- facilitating required permits;
- supervising implementation and verifying progress;
- monitoring environmental and social compliance;
- coordinating corrective actions and grievance resolution; and
- reporting significant incidents or non-compliance.

District-level appraisal will determine whether proposed investments are ready for financing. Central Project units will not repeat the substantive selection of proposals that have completed the established district appraisal process.

- **At the Village Level**

Village Governments

Village governments will lead the participatory preparation and annual review of village investment plans. They will support implementation, provide eligible Village Treasury Land where required, manage Project-financed assets, and establish arrangements for asset use, maintenance, user fees, and cost recovery.

Village governments will ensure the meaningful participation of women, youth, persons with disabilities, low-income households, Indigenous Peoples where present, and other vulnerable or disadvantaged groups.

Their environmental and social responsibilities will include:

- supporting initial environmental and social screening;
- documenting land ownership and land-use arrangements;
- disclosing relevant Project information;
- facilitating community consultation;
- supporting the implementation of mitigation measures;
- maintaining environmental and social records;
- providing access to the Project grievance mechanism; and

- reporting environmental and social incidents or concerns.

Village Facilitators

Village facilitators will assist village governments and communities with participatory planning, consultation, proposal preparation, environmental and social risk identification, implementation monitoring, and reporting.

They will promote the participation of women, youth, and vulnerable groups and help communities access grievance channels. However, facilitators will not replace qualified engineers, environmental and social specialists, appraisers, financial authorities, or investment approval authorities.

Contractors, Suppliers, and Service Providers

Contractors, suppliers, and service providers hired by the village governments will deliver works, equipment, goods, and services in accordance with applicable laws, approved designs, contracts, and Project environmental and social requirements.

Depending on their activities, they will be required to:

- implement applicable environmental and social management plans;
- comply with labor and working-condition requirements;
- provide safe working conditions and personal protective equipment;
- manage waste, hazardous materials, emissions, noise, and wastewater;
- protect community health and safety;
- apply worker codes of conduct;
- prevent sexual exploitation and abuse and sexual harassment;
- maintain worker grievance mechanisms;
- report incidents and accidents; and
- implement required corrective actions.

Environmental and social obligations will be included in procurement documents and contracts. Contractual remedies, including the withholding of payments where appropriate, may be applied in cases of material non-compliance.

Equipment suppliers will also be required, as relevant, to provide safety documentation, operating manuals, warranties, installation support, user training, and maintenance services. Equipment that does not meet applicable safety, environmental, energy-efficiency, or technical standards will not be eligible for financing.

BUM Desa, Community Groups, and Asset Operators

BUM Desa, BUM Desa Bersama, women's groups, youth groups, and other approved community institutions may receive Project support or operate Project-financed assets where supported by the appraisal results and agreed institutional arrangements. They will not automatically become fund recipients, asset owners, or operators for all investments.

Approved operators will implement asset-management and business plans, maintain infrastructure and equipment, manage user fees where applicable, ensure equitable community access, and keep

operational and financial records. They will also comply with applicable requirements on labor, occupational and community health and safety, waste management, resource efficiency, benefit sharing, and grievance management.

3.1.2. Legislation and Guidelines

This section outlines the legal framework in Indonesia, encompassing policies, regulations, laws, National Environmental and Social Assessments, and permitting requirements relevant to the SEHATI project implementation. A summary table is provided to consolidate these applicable policies, regulations, and laws. The following table presents the Legal Framework, Regulations, and Guidelines for Environmental and Social Assessment in Indonesia pertinent to the implementation of the SEHATI Project:

Table 2. Relevant Government's Regulations and Policies for the SEHATI Project

Relevant Legal Framework	Description of Legal Framework	Relevance to Project Activities
Law No. 32/2009 concerning Environmental Protection and Management, as amended by Law No. 6/2023 on Job Creation	Environmental Protection and Management (PPLH): Regulates environmental protection obligations, environmental quality standards, pollution control, and sanctions for environmental destructors.	Serves as the primary instrument ensuring that physical project activities (land preparation, facility construction) do not pollute the environment and maintain the carrying capacity of local ecosystems.
Law No. 27/2007 concerning Coastal Zone and Small Islands Management, as amended by Law No. 1/2014, in conjunction with Government Regulation No. 21/2021 on Spatial Planning Implementation and Minister of Marine Affairs and Fisheries Regulation No. 28/2021 on Marine Spatial Planning Implementation	Requires a Marine Spatial Conformity Approval (PKKPR Laut - *Persetujuan Kesesuaian Kegiatan Pemanfaatan Ruang Laut*), consistent with the local Marine/Coastal Zoning Plan, for any structure built on or over coastal waters.	Applicable to the Aquaculture and Fisheries package for building simple boat moorings/jetties (*tambatan perahu*) in coastal villages: a PKKPR Laut is required. Does not trigger the separate fishing port licensing regime, which applies only to facilities formally designated as government fishing ports.
Law No. 30/2009 concerning Electricity, in conjunction with Government Regulation No. 25/2021 concerning the Implementation of the Energy and Mineral Resources Sector, and Minister of Energy and Mineral Resources Regulation No. 11/2021 concerning the Implementation of Electricity Business Activities	Regulates electricity supply licensing, including off-grid generation for own use. Above 500 kW of generating capacity in one installation system, a self-use electricity supply license (IUPTLS) and an Operation Feasibility Certificate (SLO) are required. Up to 500 kW, the obligation is met by a single report to the Minister through the Director General of Electricity, or to the Governor, using the form in Annex V of MoEMR Regulation No. 11/2021. At that scale an SLO is still needed if the control panel is a separate part; a built-in panel needs only a product certificate or the owner's electrical-safety statement, registered with the Ministry.	Applicable to the Green Agroprocessing package, covering off-grid solar PV (PLTS) for small-scale processing. BUM Desa-scale systems are expected to be well below 500 kW, in which case no license is needed — only the one-time report. Electrical safety still applies: built-in panel units need a product certificate or an owner's safety statement plus a Ministry registration number; site-assembled systems with a separate panel need a full SLO.
Law No. 10/2009 concerning Tourism, as last amended by Law No. 18/2025 (Third Amendment), in conjunction with Government Regulation No. 28/2011 concerning the Management of Nature Reserve and Nature Conservation Areas as amended by Government Regulation No. 108/2015, and for business licensing,	Sets the framework for tourism development and tourism business licensing. The 2025 amendment moved licensing provisions out of the Law itself into implementing regulations and added dedicated chapters on tourism villages (*desa wisata*) and on priority rights for communities around destinations to work in, receive concessions from, and manage tourism. Tourism businesses are now licensed through the risk-based	Relevant to the Green Ecotourism activity package: ensures village-based ecotourism ventures (homestays, nature trails, attractions) obtain proper tourism business licensing and, where located near protected/conservation areas, comply with conservation area management rules.

Relevant Legal Framework	Description of Legal Framework	Relevance to Project Activities
Government Regulation No. 28/2025 concerning Risk-Based Business Licensing together with Minister of Tourism Regulation No. 6/2025 concerning Business Activity Standards, Procedures for Supervision, and Administrative Sanctions in the Implementation of Risk-Based Business Licensing for the Tourism Sector.	system under GR 28/2025, with sector standards, supervision and administrative sanctions set by Minister of Tourism Regulation No. 6/2025. Where tourism takes place inside or adjacent to conservation areas, GR No. 28/2011 as amended by GR No. 108/2015 governs how those areas may be used.	
Law No. 31/2004 concerning Fisheries, as amended by Law No. 45/2009	Regulates fisheries management, sustainability, licensing, and quality standards for aquaculture (cultivation of fish/shrimp), including compliance with Good Aquaculture Practices (Cara Budidaya Ikan yang Baik/CBIB) issued by the Ministry of Marine Affairs and Fisheries.	Directly relevant to the Aquaculture and Fisheries activity package: ensures fish/shrimp ponds or floating net cages developed by BUM Desa/farmer groups obtain proper business licensing and follow good aquaculture practices to prevent water pollution, disease outbreaks, and habitat degradation.
Law No. 18/2009 concerning Livestock and Animal Health, as amended by Law No. 41/2014	Regulates livestock husbandry, animal health and disease control, veterinary drug/vaccine use, animal welfare, and management of livestock waste and by-products.	Relevant to the Livestock activity package: ensures cattle/poultry/goat raising activities comply with animal health and biosecurity requirements, and that manure, wastewater, and veterinary medical waste (e.g., used vaccine vials) are managed properly.
Government Regulation No. 95/2012 concerning Veterinary Public Health and Animal Welfare	Regulates veterinary public health standards (food safety of animal-origin products, zoonosis control, hygiene at slaughter/processing sites) and animal welfare principles for livestock handling, transport, and slaughter.	Relevant to the Livestock package: ensures livestock handling, transport, and any small-scale slaughter or animal-product processing facilities supported by the project meet animal welfare and public health (zoonosis, food hygiene) standards.
Law No. 6/2014 concerning Villages, as amended by Law No. 3/2024	Establishes that village assets—including Village Treasury Land (*Tanah Kas Desa)*—are owned or managed by the Village Government to generate village revenue and support rural development. Explicitly categorizes Village land Treasury under Village Assets and mandates that its management must be approved via village consultations (*Musyawarah Desa*).	Applies where the village governments need new access for lands to support the project implementation.

Relevant Legal Framework	Description of Legal Framework	Relevance to Project Activities
Law No. 2/2012 concerning Land Acquisition for Public Needs	Provides a standardized legal framework for the Indonesian government to acquire land required for public infrastructure development while safeguarding the rights of property holders. The law structures the acquisition process into four sequential phases: planning, preparation, implementation, and the final handover of results. It mandates fair and adequate compensation determined by independent appraisers, ensuring public consultation, legal certainty, and social justice throughout the procedure.	Applies where the village governments need new access for lands to support the project implementation.
Government Regulation No. 19/2021 concerning Land Acquisition for Public Needs	Serves as an implementing regulation for Indonesia's Job Creation Law to streamline the procedures for acquiring land for public interest development projects. The regulation establishes a structured legal framework that organizes the land procurement process into four mandatory phases: planning, preparation, implementation, and the final delivery of results. Furthermore, it outlines detailed guidelines for public consultation, compensation valuation, and special procedures for small-scale land acquisitions to accelerate infrastructure growth while protecting the rights of property owners.	Applies where the village governments need new access for lands to support the project implementation.
Law No. 6/2014 concerning Villages, as amended by Law No. 3/2024	States that village development aims to improve the welfare of rural communities and the quality of human life, prioritizing the spirit of togetherness, kinship, and mutual cooperation (*Gotong-Royong*).	Relevant to the project activities that will be implemented using mutual cooperation (*gotong-royong*) scheme.
Minister of Villages and Development of Disadvantaged Regions Regulation No. 16/2025 on Operational Guidelines for the Focus of Village Fund Use in 2026 (issued each year)	Sets the focus of Village Fund use for 2026, including village infrastructure built and maintained through Village Cash-for-Work (Padat Karya Tunai Desa/PKTD). PKTD is a productive village community empowerment initiative—particularly targeting poor and marginalized residents—that prioritizes the utilization of local resources, labor, and technology.	Relevant to the project activities that will be implemented using Village Cash-for-Work (*Padat Karya Tunai Desa/PKTD*) scheme.
Minister of Energy and Mineral Resources Regulation No. 4/2026 on Groundwater Use	Regulates groundwater abstraction, distinguishing a business license from a non-business approval; an	Applies where Aquaculture, Livestock, Agriculture, and Agroprocessing activities draw groundwater from wells. Smallholder

Relevant Legal Framework	Description of Legal Framework	Relevance to Project Activities
and Administrative Fines for Non-Compliant Groundwater Business Licenses and Approvals (implementing Government Regulation No. 30/2024 on Water Resources Management, under Law No. 17/2019 on Water Resources)	approval is required for basic needs of 100 m^3/month or more per household or group and for group wells provided by the government or others, but not below that threshold or for smallholder farming that is not a business.	farming that is not a business ("pertanian rakyat") needs no approval, but a group well built with Project funds does; use by a BUM Desa, cooperative or other business requires a business license (Izin Pengusahaan Air Tanah) through OSS. Ecotourism homestays are treated as business use regardless of scale and require a license — though the process is simpler for micro/small operations. Water-based tourism run for public benefit rather than as a business needs an approval instead.
Law No. 22/2019 concerning Sustainable Agricultural Cultivation Systems, in conjunction with Law No. 18/2012 concerning Food	Mandates environmentally sound and land-suitable farming practices, sustainable water and soil resource use, food security planning, and the controlled, registered use of fertilizers and pesticides.	Relevant to the Food Security (Agriculture) activity package: guides sustainable land use, safe and controlled application of fertilizers/pesticides, and food safety standards for crop cultivation activities financed under the project.
Law No. 3/2014 concerning Industry and Law No. 30/2007 concerning Energy, in conjunction with GR No. 28/2025 on Risk-Based Business Licensing and the sector-specific Green Industry Standards (*Standar Industri Hijau*) issued by the Minister of Industry Regulation No. 44/2024 concerning Green Industry Standards for the Palm Cooking Oil Industry.	Sets the framework for industrial development, including green industry. Under Law No. 3/2014 the Minister of Industry issues Green Industry Standards (SIH) per sub-sector, covering energy and water efficiency, raw materials, processes and emissions, and certifies companies that meet them. SIH applies voluntarily unless the Minister makes one mandatory, which has not happened for food processing. Industrial licensing runs through the risk-based system under GR 28/2025. Law No. 30/2007 sets national energy policy, including promotion of renewable energy.	Relevant to the Green Agroprocessing package, which supports small-scale processing using renewable energy such as biogas and solar dryers. These units register through the risk-based licensing system; at BUM Desa scale this normally means an NIB rather than a full industrial license. Green Industry Standards are a benchmark, not an obligation, the ESMF should match the standard to the product and treat certification as good practice.
Minister of Public Works and Housing Regulation No. 2/2024 concerning Procedures for Business Licensing and Approval for the Use of Water Resources, implementing Law No. 17/2019 concerning Water Resources, read together with Government Regulation No. 30/2024 concerning Water Resources Management	Governs the use of surface water, such as rivers, lakes, springs. Business use requires a Business License (*Perizinan Berusaha*); non-business use and irrigation require an Approval (*Persetujuan*) instead. Smallholder use (*pertanian rakyat*), covering food crops, fisheries, livestock, plantations and forestry at up to 2 liters per second per household, is exempt from approval only where it uses an existing irrigation system and does not alter the natural condition of the water source. Once either condition is not met, an Approval is required.	Relevant to the Aquaculture, Food Security/Agriculture and Livestock packages drawing water from rivers or existing irrigation. Household-scale use within existing irrigation and below 2 liters/second is exempt as pertanian rakyat, but any intake that alters the water source, or use outside an existing irrigation system, needs an Approval. BUM Desa or commercial-scale abstraction needs a Business License. Water-based ecotourism is not automatically business use — where it is run for public benefit rather than as a business, an Approval is enough.

Relevant Legal Framework	Description of Legal Framework	Relevance to Project Activities
Government Regulation No. 22/2021 concerning the Implementation of Environmental Protection and Management	Implementation of Environmental Protection and Management: A derivative regulation governing the procedures for preparing Environmental Documents (AMDAL, UKL-UPL, SPPL), Environmental Approvals, and the Management of Hazardous (B3) and Non-Hazardous Waste.	Determines the type of environmental permits required before initiating physical projects or BUM Desa (Village-Owned Enterprises) ventures (e.g., SPPL for micro/small scale enterprises, or UKL-UPL for medium-scale/food processing ventures).
Law No. 32/2009 (Articles 15–18), Government Regulation No. 46/2016 concerning Procedures for Conducting Strategic Environmental Assessment (KLHS), and Minister of Environment and Forestry Regulation No. 13/2024 concerning the Implementation of Government Regulation No. 46/2016	Strategic Environmental Assessment (KLHS): Requires national, provincial and district governments to prepare a KLHS for spatial plans (RTRW), long- and medium-term development plans and other policies, plans and programs that may affect the environment. A KLHS assesses environmental carrying capacity, environmental impacts and risks, ecosystem services, efficiency of natural resource use, vulnerability to climate change, and biodiversity.	SEHATI does not prepare its own KLHS; it uses the existing provincial and district KLHS (for the RTRW and the RPJMD) as a source of information. The CPMU checks them when it prepares the Village Biodiversity Sensitivity Register in Step 1 of the Biodiversity Screening Procedure (Annex V), so that natural habitats, corridors and areas where carrying capacity is already exceeded are taken into account in screening.
Law No. 6/2014 concerning Villages, as amended by Law No. 3/2024	Village Law: Regulates village autonomy, village financial governance (Village Funds), community-participatory development, and the utilization of village assets.	Acts as the primary legal foundation for implementing activities at the village level, ensuring project approval through Village Consultative Meetings (*Musyawarah Desa*/Musdes) and the integration of project plans into the Village Government Work Plan (RKP Desa).
Government Regulation No. 11/2021 concerning Village-Owned Enterprises	Village-Owned Enterprises (BUM Desa): Regulates the legal standing of BUM Desa and Joint BUM Desa as legal entities managing village economic enterprises and village assets.	Relevant for business units managing green economic activities and project food supply chains, ensuring they possess business legality, official bank accounts, and legitimate business partnerships.
Law No. 18/2008 concerning Waste Management, Government Regulation No. 81/2012 concerning the Management of Household Waste and Waste Similar to Household Waste, Government Regulation No. 27/2020 concerning Specific Waste Management, and Minister of Environment and Forestry Regulation No. 14/2021 concerning Waste Management at Waste Banks	Waste and Household Waste Management: Regulates obligations for integrated reduction and handling of domestic waste and organic waste. Specific waste, such as household waste containing hazardous substances and construction debris, is kept apart and handled separately; waste banks follow minimum operating standards.	Relevant for mitigating waste from integrated agriculture/livestock farming, including through the establishment of village-level organic waste processing facilities (composting units, biodigesters), managing post-harvest residues, and applying zero-waste principles in green economic activities. Waste generated by Project works and facilities is managed under ESCOP 1, and village waste facilities (TPS3R, waste banks, composting units) under ESCOP 5 (Annex III).

Relevant Legal Framework	Description of Legal Framework	Relevance to Project Activities
Law No. 11/2010 concerning Cultural Heritage	Cultural Heritage and Protection of Indigenous Peoples' Rights: Regulates the protection of cultural heritage, customary sites, and the recognition of customary law communities and their territories.	Relevant to ensure project locations do not damage local cultural sites and to apply the Free, Prior, and Informed Consent (FPIC) mechanism when involving customary territories.
Minister of Environment and Forestry Regulation No. 4/2021 concerning the List of Businesses and/or Activities Required to Prepare an Environmental Impact Assessment, an Environmental Management and Monitoring Plan, or a Statement of Environmental Management and Monitoring Capability.	List of Businesses/Activities Subject to AMDAL, UKL-UPL, or SPPL: Determines environmental risk categories based on business scale and land area.	Serves as a technical guideline for screening which category of environmental document must be prepared by BUM Desa or village project managers.
Minister of Environment and Forestry Regulation No. 6/2021 concerning Procedures and Requirements for the Management of Hazardous and Toxic Waste.	Procedures and requirements for the Management of Hazardous and Toxic Waste (B3 - *Bahan Berbahaya dan Beracun*)	Relevant for project activities that may generate small-scale hazardous waste, such as used pesticide containers, used oil from farm machinery/equipment, used batteries, or veterinary medical waste from integrated agriculture-livestock activities. Ensure BUM Desa/village project implementers store, label, and manage such waste in compliance with technical B3 requirements before handover to a licensed B3 waste collector/processor.
Minister of Environment Regulation No. 5/2014 concerning Wastewater Quality Standards, as amended by Minister of Environment and Forestry Regulation No. P.21/2018 and No. P.16/2019, read together with the sector-specific standards in Minister of Environment/Head of the Environmental Control Agency Regulation No. 1/2025 concerning Shrimp Pond Wastewater Treatment, No. 11/2025 concerning Wastewater Quality Standards and Treatment Technology Standards for Domestic Wastewater, and No. 2/2026 concerning Wastewater Quality Standards and Treatment Technology Standards for	Sets the maximum permissible pollutant levels for wastewater discharged by different categories of business and activity. MoE Regulation No. 5/2014, as twice amended, remains the general baseline, but where a sector-specific standard has been issued it takes precedence, currently shrimp ponds, domestic wastewater, and animal and aquaculture feed production, the last of which also prescribes required treatment technology.	Cross-cutting reference for the Aquaculture, Livestock and Green Agroprocessing packages. It sets the effluent quality that project-supported ponds, livestock pens and processing units must meet before discharging to surrounding water bodies. Shrimp pond subprojects follow MoE/BPLH Regulation No. 1/2025, feed production follows No. 2/2026, and communal sanitation facilities follow No. 11/2025; other activities fall back on MoE Regulation No. 5/2014 as amended.

Relevant Legal Framework	Description of Legal Framework	Relevance to Project Activities
Animal Feed and Aquaculture Feed Businesses and/or Activities.		
Minister of Agriculture Regulation No. 1/2019 concerning the Registration of Organic Fertilizer, Biological Fertilizer and Soil Conditioners.	Sets quality standards and registration requirements for organic fertilizer, biological fertilizer, and soil conditioners produced from composted organic waste (e.g., crop residue, animal manure, processing by-products).	Applicable to the Food Security (Agriculture) and Green Agroprocessing packages where project activities involve composting agricultural or livestock organic waste into organic fertilizer for sale or reuse, supporting circular economy practices
Minister of Environment and Forestry Regulation No. P.20/MENLHK/SETJEN/KUM.1/6/2018 concerning Protected Species of Flora and Fauna, as amended by MoEF Regulation No. P.92/2018 and MoEF Regulation No. P.106/2018 (Second Amendment)	Establishes and updates the official list of protected flora and fauna species in Indonesia, based on scientific authority (LIPI) assessment and consideration of population status, conservation needs, and socio-economic factors.	Relevant for the Green Ecotourism package, to ensure nature/wildlife-based tourism activities do not involve capture, disturbance, or trade of protected species; and for the Aquaculture and Fisheries package, to ensure cultivated species are not listed as protected. Also serves as a cross-cutting biodiversity safeguard reference for project sites located near natural habitats.
Minister of Marine Affairs and Fisheries Decree No. 66/2025 concerning Protected Fish Species	MMAF Decree No. 66/2025 sets full protection for 63 species (whales, dolphins, dugong, sea turtles, crocodiles, freshwater stingrays, arowana, belida, sawfish and coelacanth) and limited protection for Irian arowana and three crocodile species, with size and season restrictions. Full protection covers all life stages, body parts and derivative products. Exemptions apply only to research, development, broodstock for breeding, and case handling.	Relevant for the Aquaculture and Fisheries package, to ensure cultivated and seed species are not protected, protected species are not caught as bycatch, and native protected species near culture sites are considered in invasive species risk. Relevant for the Green Ecotourism package, to ensure marine and freshwater tourism does not involve capture, handling, or trade of protected species or their products (e.g., turtle eggs). Used together with MoEF Regulation No. P.106/2018, as some species are listed under both.
Government Regulation No. 27/2025 concerning the Protection and Management of Mangrove Ecosystems	Implements Law No. 32/2009 on Environmental Protection and Management (as amended by Law No. 6/2023) for mangrove ecosystems. It regulates the protection, use, control, maintenance and supervision of mangrove ecosystems, to keep mangrove functions and prevent mangrove damage.	Relevant for the Aquaculture and Fisheries package, especially brackish-water ponds (tambak) and boat moorings in coastal villages, to avoid clearing or converting mangroves. Relevant for the Green Ecotourism package where mangrove areas are used for tourism, so that activities follow mangrove protection rules. Supports the habitat screening and the no-conversion measure in the ESMF under ESS6.
Minister of Marine Affairs and Fisheries Regulation No. 19/PERMEN-KP/2020 concerning the Prohibition of Import, Cultivation, Distribution and Export of Harmful and/or Detrimental Fish Species	Prohibits the import, cultivation, distribution and export of fish species listed as harmful and/or detrimental, such as predatory, venomous or parasitic species that can threaten native fish and ecosystems, including their body parts. The prohibited species are listed in the	Prohibits the import, cultivation, distribution and export of fish species listed as harmful and/or detrimental, such as predatory, venomous or parasitic species that can threaten native fish and ecosystems, including their body parts. The prohibited species are listed in the annex, with an exemption for fisheries research and

Relevant Legal Framework	Description of Legal Framework	Relevance to Project Activities
into and from the Fisheries Management Areas of the Republic of Indonesia	annex, with an exemption for fisheries research and development. Relevant for the Aquaculture and Fisheries package, to make sure cultivated species, seed and broodstock are not on the prohibited list. Common introduced species such as tilapia and African catfish are not prohibited but can still become invasive if they escape, so the ESMF applies containment and monitoring measures under ESS6. Also relevant for the Green Ecotourism package if fishing ponds or ornamental fish attractions are developed.	development. Relevant for the Aquaculture and Fisheries package, to make sure cultivated species, seed and broodstock are not on the prohibited list. Common introduced species such as tilapia and African catfish are not prohibited but can still become invasive if they escape, so the ESMF applies containment and monitoring measures under ESS6. Also relevant for the Green Ecotourism package if fishing ponds or ornamental fish attractions are developed.
Minister of Environment/Head of the Environmental Control Agency Regulation No. 1/2025 concerning Wastewater Treatment for Shrimp Pond Aquaculture	Requires shrimp pond operators to treat wastewater before discharge, setting specific effluent quality standards (pH, BOD, PO4, NH3, TSS) and mandatory treatment technology (pre-treatment, equalization pond, aerobic biological treatment, constructed wetlands), along with periodic monitoring and reporting obligations.	Directly applicable to the Aquaculture and Fisheries package where shrimp farming (tambak udang) is included, providing the specific technical wastewater standard and treatment design that project-supported shrimp ponds must meet.
Minister of Environment/Head of the Environmental Control Agency Regulation No. 11/2025 concerning Wastewater Quality Standards and Wastewater Treatment Technology Standards for Domestic Wastewater	Sets updated effluent quality standards and treatment technology requirements for domestic wastewater (blackwater/greywater) from households, small businesses, and communal facilities.	Relevant to the Green Ecotourism package, applying to wastewater from homestays and visitor facilities developed under the project, as well as to worker/staff sanitation facilities at processing units under other packages.
Minister of Environment/Head of the Environmental Control Agency Regulation No. 2/2026 concerning Wastewater Quality Standards and Wastewater Treatment Technology Standards for Livestock Feed and Aquaculture Feed Businesses and/or Activities	Requires livestock feed and aquaculture feed producers to treat wastewater (e.g., from boiler blowdown, laboratory and production equipment washing) before discharge or reuse, setting specific effluent standards and treatment technology requirements based on discharge volume and method. Small-scale operations (≤3 m^3/day) may use a simplified, self-developed technical standard.	Applicable only if the Livestock or Green Agroprocessing package includes livestock/aquaculture feed production (e.g., a BUM Desa-run feed mill); distinct in scope from MoE/BPLH Regulation No. 1/2025, which covers wastewater from shrimp pond cultivation itself, not feed production.
Minister of Environment/Head of the Environmental Control Agency Regulation No. 9/2026 concerning the Implementation	Establishes a village-level program (Kampung Iklim/Komunitas Iklim) combining climate adaptation actions (e.g., food security, disaster resilience, energy efficiency) and mitigation actions (e.g., waste	Presents a synergy opportunity across most SEHATI packages, since Proklim operates at the village level. Food Security (low-emission agriculture), Green Agroprocessing (renewable energy), Aquaculture/Livestock (waste management), and Green Ecotourism

Relevant Legal Framework	Description of Legal Framework	Relevance to Project Activities
of Community-Based Climate Change Control Programs	management, renewable energy, low-emission agriculture), with registration and formal recognition through the National Climate Change Registry System (SRN PPI).	(ecosystem management) can align with and register under Proklim — giving project villages formal recognition, potential access to additional public funding, and a stronger basis to demonstrate the project's climate outcomes.

3.1.3. Regional and International Agreements

Some regional and international agreements are relevant as an umbrella for the SEHATI Project planning, implementation, monitoring, and evaluation. The MoVDA will refer to those regional and international agreements listed in the table below.

Table 3. Regional and International Agreements Relevant to the SEHATI Project

Agreement	Objective
ASEAN Master Plan on Rural Development and Poverty Eradication (2021–2025) [Regional]	Accelerates poverty eradication and enhances the economic resilience of rural communities across the ASEAN region through local community empowerment.
ASEAN Framework Action Plan on Rural Development and Poverty Eradication (2021) [Regional]	Promotes inclusive partnerships between the government, private sector, and communities in fostering local economic development and provisioning village infrastructure.
ASEAN Declaration on Strengthening Rural Development (2023) [Regional]	Enhances rural-urban connectivity, drives rural digitalization, and opens broader market access for MSME and BUM Desa products.
Paris Agreement (2015) [International]	Strengthens local climate action and eco-friendly community-based development to reduce carbon emissions and improve rural climate adaptation.
2030 Agenda for Sustainable Development / SDGs (2015) [International]	Serves as the foundation for achieving Village SDGs, particularly poverty eradication (SDG 1), decent work and economic growth (SDG 8), and partnerships for the goals (SDG 17).
UN Convention on Biological Diversity / CBD (1992) [International]	Promotes community-based natural resource management and the sustainable conservation of local ecosystems to support the livelihoods of rural residents.

3.2. World Bank

3.2.1. The World Bank Environmental and Social Framework (ESF)

The World Bank's Environmental and Social Framework (ESF) outlines the mandatory requirements and comprehensive standards designed to protect people and the environment in projects supported through Investment Project Financing (IPF). The ESF aims to systematically identify, avoid, and mitigate adverse environmental and social impacts, thereby enhancing the overall development outcomes of a project. At the core of the ESF are ten Environmental and Social Standards (ESS) that establish the specific operational requirements Borrowers must meet to ensure sustainable project design and execution.

For the SEHATI (Integrated Green Economic Self-Sufficiency and Food Security) Project, the Ministry of Villages and Development of Disadvantaged Regions (MoVDA) will formally adopt and strictly implement the World Bank ESF. The standards and mitigation hierarchies outlined within the ESF will be fully integrated into every phase of the SEHATI Project cycle. This includes comprehensive risk assessment during project planning, proactive safeguard management during implementation, continuous oversight during monitoring and evaluation (M&E), and finalized audits during project closing.

To ensure robust environmental and social safeguarding, MoVDA is committed to dual compliance. The SEHATI Project will be executed in strict accordance with both the World Bank ESF and the applicable National Regulations and Policies of the Government of Indonesia. In instances where national legislation and World Bank standards differ, the project will apply the more stringent requirement, ensuring the highest level of protection for local communities, cultural heritage, and ecological assets throughout the project's lifespan.

3.2.2. Applicable Environmental and Social Standards (ESS)

Table 4. Summary of Environmental and Social Standards (ESS) Relevant to the SEHATI Project

ESS	Standard Name (ESS)	Key Focus & Scope
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	General framework for AMDAL/RKL-RPL, Social AMDAL, risk screening, and compliance instruments (ESCP/ESMP). The SEHATI Project ensures that all environmental management documents (UKL-UPL, SPPL or ESMP) are not merely licensing formalities, but rather mandatory technical guidelines applied on-site to prevent negative impacts on the local environment or social conflicts within the community.
ESS2	Labor and Working Conditions	Labor and working conditions for project workers, including fair terms and conditions of employment, nondiscrimination and equal opportunity, workers' rights, OHS (Occupational Health and Safety), prohibition of child labor/forced labor, and accessible worker grievance mechanisms. The SEHATI Project ensures that rural economic and infrastructure development does not compromise the welfare, safety, or dignity of the workers implementing them on the ground.
ESS3	Resource Efficiency and Pollution Prevention and Management	Energy/water efficiency, waste management (hazardous and non-hazardous), and greenhouse gas emissions. Through ESS3, the SEHATI Project ensures that rural economic growth and BUM Desa management align with environmental sustainability principles without polluting village ecosystems.
ESS4	Community Health and Safety	Infrastructure safety risks, impacts on surrounding communities, and the prevention of gender-based violence (GBV/SEA/SH). The implementation of ESS4 ensures that SEHATI Project field activities do not create potential physical hazards or social-gender risks for local village communities.
ESS5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Addresses risks and impacts associated with land acquisition, restrictions on land use, physical and economic displacement, impacts on assets and livelihoods, and voluntary land transactions or donations. The Project-supported infrastructure and facilities may require access to land or result in temporary access restrictions or minor impacts on non-land assets and livelihoods. The Project will prioritize Village Treasury Land (Tanah Kas Desa) and manage eligible land-access arrangements through the Land

ESS	Standard Name (ESS)	Key Focus & Scope
		Access Procedures (LAP); land purchase, compulsory acquisition, physical displacement, and significant economic displacement are excluded from Project financing.
ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Protection of critical/natural habitats, ecosystem services, and sustainable use of living natural resources. SEHATI excludes activities affecting protected areas, critical habitats, mangroves, peatlands, wetlands and coral reefs, and manages other biodiversity risks through proposal screening, the ESCOP implementation and a Simple ESMP, with the Biodiversity Screening Procedure as the basis for further technical guidance.
ESS7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Identification and screening of Masyarakat Adat who meet the ESS7 criteria; culturally appropriate and meaningful engagement; equitable access to Project benefits; assessment and management of potential impacts on customary land, natural resources, livelihoods, and cultural practices; and FPIC where required under ESS7. The SEHATI Project ensures the IPs screening integrated into the village investment proposal process, with site-specific measures and FPIC applied where required under ESS7.
ESS8	Cultural Heritage	Protection of cultural heritage sites, artifacts, and both tangible and intangible cultural heritage. The SEHATI Project will identify and avoid or minimize impacts on cultural heritage, including through screening, consultation, appropriate protection measures, and chance-find procedures for activities involving civil works or ground disturbance.
ESS10	Stakeholder Engagement and Information Disclosure	Stakeholder Engagement Framework (SEF), regular public consultations, and the Grievance Redress Mechanism (GRM). The SEHATI Project ensures that village development governance operates transparently, through active participation, and accountably for all citizens and stakeholders.

3.2.3. Environmental and Social Risk Classification

The World Bank classifies the environmental and social risk of investment projects as High, Substantial, Moderate, or Low, taking into account the nature and scale of potential risks and impacts, the implementation context, and the capacity and commitment of the responsible institutions to manage those risks. The classification is applied using a risk-based and proportionate approach and may be reviewed during Project implementation as risks and circumstances evolve. The ESF applies increased oversight and resources to more complex projects and emphasizes institutional capacity strengthening.

Table 5. Basis for SEHATI's Substantial E&S Risk Classification

Risk Consideration	Relevance to SEHATI	Proposed Risk-Management Response
Scale and geographic dispersion	The Project will support approximately The 6,085-entry longlist will be screened to target approx. 5,000 villages through numerous geographically dispersed investments, making consistent implementation, supervision, monitoring, and corrective action more challenging.	Standardized E&S requirements, digital screening and recordkeeping, district verification, risk-based supervision, regular reporting, and escalation procedures.
Decentralized and demand-driven implementation	Specific activities and locations will be identified progressively through village investment proposals. Actual risks and required measures will therefore vary by activity and location.	ESMF eligibility and exclusion criteria; activity-level screening; proportionate mitigation measures; village-level E&S instruments; and review before approval.
Existing Village Fund system	Village-level investments financed through the regular Village Fund system do not currently apply a formal E&S screening process comparable to SEHATI requirements. Existing systems for stakeholder-engagement documentation, grievance management, and OHS monitoring are also uneven.	Integrate E&S requirements into village proposal templates, technical guidelines, district verification procedures, operational guidance, digital systems, monitoring tools, and reporting arrangements.
Institutional capacity	E&S staffing, systems, implementation experience, and capacity vary across the multiple national, district, and village-level actors involved. Consistent application across participating locations remains a key challenge. The World Bank's assessment identifies varying village and district capacity as contributing to the Substantial social risk rating.	Qualified E&S specialists and focal points; clear institutional responsibilities; practical tools; initial and refresher training; implementation support; risk-based supervision; and corrective-action follow-up.
Diversity of investments and risks	Investments may include productive infrastructure, equipment, fisheries and aquaculture, ecotourism, water-related investments, digital connectivity, and business-development activities. Potential risks cover construction, OHS, community safety, pollution and waste, biodiversity, land access, inclusion, cultural heritage, and stakeholder engagement.	Exclude high-risk activities; apply ESS-specific screening and management measures; incorporate requirements into designs, procurement, contracts, implementation, operation, and monitoring.
Social inclusion and accountability	Women, youth, persons with disabilities, poor households, Masyarakat Adat meeting ESS7 criteria, and less influential groups may face barriers to participation and benefits. Additional risks include	Inclusive Musdes and proposal endorsement; targeted outreach; transparent eligibility and selection criteria; public disclosure; conflict-of-interest

Risk Consideration	Relevance to SEHATI	Proposed Risk-Management Response
	elite capture, unequal benefit access, weak transparency, conflicts of interest, and inaccessible grievance channels.	controls; tiered FGRM; and monitoring of participation and benefit access.
Systemic implementation risk	Although individual investments are generally expected to have site-specific and manageable impacts, weaknesses in screening, consultation, land due diligence, labor and OHS oversight, grievance handling, or monitoring could be repeated across many locations and may not be detected or addressed consistently.	Standardize processes across the Project; embed E&S functions in operational and digital systems; verify compliance before approval and disbursement; use aggregate monitoring to identify recurring gaps; and apply adaptive management.

3.3. Gap Analysis

Table 6. Assessment of Gaps between the Indonesian Regulatory Framework and the World Bank Environmental and Social Standards

Applicable Environmental and Social Standard (ESS)	Identified Regulatory or Implementation Gap	Measures to Address the Gap
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	Indonesia has clear laws and regulations on the protection and management of environmental and social impacts (e.g., Law No. 32/2009 as amended by Law No. 6/2023, and GR No. 22/2021). However, these regulations are designed for businesses or activities whose location and design are already known. They do not provide a framework approach for a program such as SEHATI, where many small subprojects under five activity packages in around The 6,085-entry longlist will be screened to target approx. 5,000 villages will only be identified during implementation. Indonesia's environmental screening (GR No. 22/2021 and MoEF Regulation No. 4/2021) sets which document is needed (AMDAL, UKL-UPL or SPPL) based on environmental and social risk. AMDAL and UKL-UPL include an environmental study and a general social, economic and cultural baseline, but SPPL, which most villages are expected to use, has no social baseline. Although AMDAL and UKL-UPL describe and assess social and economic aspects, they do not replace the specific instruments required under the ESF, such as Labor Management Procedures, land access procedures for informal land users, FPIC for Indigenous Peoples, or Chance Find Procedures.	Prepare, implement, monitor, and periodically evaluate an ESMF that applies to all SEHATI activity packages. The ESMF will establish an integrated approach to identifying, assessing, and managing environmental and social risks and impacts throughout the project cycle. The ESMF will include an E&S screening checklist for subprojects under all five SEHATI packages (Aquaculture and Fisheries, Livestock, Food Security/Agriculture, Green Ecotourism and Green Agroprocessing). The checklist combines the national AMDAL/UKL-UPL/SPPL screening under MoEF Regulation No. 4/2021 with World Bank E&S risk criteria, especially for activities that only need an SPPL. Screen proposed activities and exclude activities classified as high risk or requiring an AMDAL. Give priority to eligible activities that require only a Statement of Environmental Management and Monitoring Capability (SPPL), where applicable. Where an activity requires a UKL-UPL (e.g., a medium-scale food processing unit, a semi-intensive shrimp pond, a feed mill or a larger livestock farm), the village or BUM Desa must still prepare it. This also applies when an activity that started under an SPPL grows to a scale that requires a UKL-UPL. The Central Project Management Unit (CPMU) will provide training and support to village authorities in preparing and submitting the SPPL or UKL-UPL.
ESS2: Labor and Working Conditions	The national labor framework does not expressly require project-specific Labor Management Procedures (LMP), including provisions applicable to primary supply workers. It also does not provide for a dedicated grievance mechanism for project workers. In addition, occupational health and safety requirements may not be sufficiently tailored to village-level works implemented through cash-for-work arrangements, voluntary labor, or community mutual-assistance schemes.	Prepare and implement project-specific LMP covering all relevant categories of project workers. The LMP will include a dedicated worker grievance mechanism, proportionate occupational health and safety measures, and contractual requirements prohibiting child labor and forced labor, including requirements applicable to primary suppliers.
ESS3: Resource Efficiency and Pollution Prevention and Management	Indonesian environmental laws and regulations concerning pollution prevention and management cover air emissions and emission standards, greenhouse gas emission reduction, hazardous and non-hazardous waste management, as well as water and wastewater discharge quality standards. These regulations take into	To support pollution prevention, the ESMF will provide a simple, easy-to-understand checklist that covers the requirements of the applicable laws and regulations for each package, including activities that only need an SPPL.

Applicable Environmental and Social Standard (ESS)	Identified Regulatory or Implementation Gap	Measures to Address the Gap
	consideration the surrounding environmental conditions and type of business/activities. Pollution prevention measures are normally identified through engineering design and the environmental document (AMDAL, UKL-UPL or SPPL). However, compliance at the village level may be difficult due to limited resources, technical capacity and funding. SPPL, which most village activities will use, is only a statement of commitment and does not set out detailed pollution control measures. In addition, the Food Security package may use pesticides, and village activities may produce small amounts of hazardous waste, such as empty pesticide containers, used oil, used batteries and veterinary medical waste. Villagers often have limited knowledge of safe handling, and licensed B3 waste collectors are often not available nearby.	To strengthen the baseline for screening, the village facilitator and the village government shall observe each site before the activity begins. During the screening visit, they walk the site and its surroundings and record the existing conditions in the Environmental Setting Form (Annex II): land use, nearby sensitive places and industries, water, air, noise, waste, soil, natural hazards, environmental and social issues, and cultural heritage. The baseline is qualitative, based on observation, interviews with residents and photographs, without instrument measurements. Where the observation shows existing pollution or a sensitive receptor close to a discharge point, or the activity requires a UKL-UPL, the PIU arranges measurements with the DLH before works start (Annex III, Part A). The DCT checks the form during district verification, and it serves as the reference for monitoring, complaint handling and site restoration. The form is not an approval document and does not affect whether a proposal is approved; it only records the initial condition of the proposed project location. The ESMF will provide general guidance and capacity building for villages and BUM Desa on the safe use and storage of pesticides under the Food Security package. Empty pesticide containers will be managed as hazardous (B3) waste, following the hazardous waste guidance below. The ESMF will also include guidance and capacity building for villages and BUM Desa on basic hazardous waste management, covering safe storage, labeling and handover to licensed B3 waste collectors, in line with MoEF Regulation No. 6/2021. The ESMF also sets out what must be done if Project activities contaminate soil, surface water or groundwater: stop and contain the source, report the incident, investigate the cause and remediate the affected land and water in line with Law No. 32/2009 (Article 54), GR No. 22/2021 and MoEF Regulation No. P.101/2018. The procedure is in the ESCOP (Annex III, Part A, section 1), and spill response on site is in ESCOP 1 (ESCP Action 3.8). For resource efficiency, the ESMF will provide examples of how circular economy principles can be applied across packages. For example, villagers can be guided to reuse waste, by-products or residues from one activity in another, such as using coconut pulp (*ampas kelapa*) from coconut oil processing (Green Agroprocessing) as

Applicable Environmental and Social Standard (ESS)	Identified Regulatory or Implementation Gap	Measures to Address the Gap
		fertilizer for crops (Food Security). This supports the green economy objective of SEHATI by improving resource efficiency and reducing waste.
ESS4: Community Health and Safety	Risks to nearby communities arising from the presence or mobilization of project workers, including communicable disease transmission and construction traffic safety risks, are often addressed through separate sectoral requirements rather than through an integrated community health, safety, and emergency-preparedness approach. Other risks come from the project activities themselves. Livestock and aquaculture activities involve close contact with animals, which can spread zoonotic diseases (e.g., avian influenza, anthrax) and animal or fish diseases to nearby communities if animals, carcasses and waste are not handled properly. Visitors to Green Ecotourism sites may also bring communicable diseases into host villages, which often have limited health facilities. National regulations on animal health and zoonosis control (Law No. 18/2009 as amended by Law No. 41/2014, and GR No. 95/2012) apply, but monitoring and compliance at village scale are often limited. Green Agroprocessing units may also pose electrical and fire risks from off-grid solar systems, and food safety risks from processed products. Land clearing by burning, which is prohibited under Project SEHATI, may also create a risk of fire spreading to surrounding areas and exposing nearby communities and workers to smoke and degraded air quality if such prohibited activities occur. This risk may be particularly relevant during dry periods and in areas near settlements, forests, peatlands, or other fire-prone areas.	Prepare and implement a Community Health and Safety Plan proportionate to project risks. Require workers to comply with a Code of Conduct and establish emergency preparedness and response procedures, including arrangements for disaster-related emergencies where relevant. The Community Health and Safety Plan will also include: (i) basic biosecurity and safe handling for the Livestock and Aquaculture and Fisheries packages, such as personal protective equipment, hand washing, vaccination where required, quarantine of new animals or fish seed, isolation of sick animals, safe disposal of carcasses and waste, and prompt reporting of suspected outbreaks to the local animal health or fisheries office; (ii) simple health and hygiene measures at Green Ecotourism sites, such as clean water and sanitation, visitor health and safety rules, first aid, and coordination with the local health center (Puskesmas) during disease outbreaks; and (iii) basic electrical and fire safety for off-grid solar systems, and hygiene and food safety practices at Green Agroprocessing units. For the Food Security (Agriculture) package, the ESMF will prohibit land clearing by burning in accordance with the SEHATI exclusion list and require non-burning methods for agricultural land preparation. Where relevant, basic fire prevention, early reporting, and emergency response measures will be applied to protect workers and nearby communities from accidental fire and smoke exposure.
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	National land acquisition provisions, including Law No. 2/2012, primarily address compensation for recognized rights holders. Persons without formal legal rights to land, including informal occupants or cultivators, may not be eligible for compensation for land and may not be systematically covered by livelihood restoration measures.	Limit land access for project activities to village treasury land or documented voluntary land donation. A voluntary donation must not exceed 10 percent of the donor's affected landholding and must not cause significant impacts on the donor's livelihood. Prepare Land Access Procedures for Project SEHATI, including eligibility criteria, due diligence, documentation, consultation, grievance arrangements, and safeguards to ensure that any donation is informed and free of coercion.
ESS6: Biodiversity Conservation and Sustainable Management of	Indonesian Government regulations on biodiversity conservation are generally aligned with the objectives of ESS6 in promoting the protection and conservation of biodiversity. However, a key regulatory gap is that the national regulatory framework does not explicitly require a systematic assessment of project impacts	The ESMF Exclusion List will exclude the following from SEHATI financing: all physical works inside or within 1 km of protected forests, national parks, nature reserves and other conservation areas, or inside critical habitats; new or upgraded roads or tracks that open or increase access into natural forest or other sensitive natural habitats;

Applicable Environmental and Social Standard (ESS)	Identified Regulatory or Implementation Gap	Measures to Address the Gap
Living Natural Resources	on natural and critical habitats, nor does it establish requirements equivalent to those under ESS6 for the management and mitigation of impacts on such habitats. As an example, for coastal and marine activities under the Aquaculture and Fisheries and Green Ecotourism packages, some spatial controls already exist, such as the PKKPR Laut requirement under GR No. 21/2021 and MMAF Regulation No. 28/2021, and the protection of mangrove ecosystems under GR No. 27/2025. However, national regulations do not require a habitat sensitivity assessment or critical habitat determination, as ESS6 does, before approving small coastal structures (e.g., boat moorings) or aquaculture activities.	conversion or clearing of forest, peatlands, mangroves or wetlands; destruction of coral reefs and seagrass beds; coastal or water body reclamation and construction materials taken from unlicensed quarries, riverbeds, beaches or mangroves; land clearing by burning; destructive fishing; the use of protected species (whole or in part); and the culture of non-native or invasive species without adequate risk assessment and mitigation measures. All activities will be screened for biodiversity risks at the proposal stage. Where potential impacts on natural or sensitive habitats are identified, district or CPMU environmental specialists will assess them further, and the required measures, following the mitigation hierarchy (avoidance, minimization and restoration), will be included in the ESMP. The Biodiversity Screening Procedure (BSP) and Biodiversity Management Plan (BMP) will serve as the basis for this technical guideline. Activities with unacceptable impacts on critical habitat will not be eligible for financing. Food Security (agriculture), aquaculture, fisheries and livestock subprojects will also follow good practices for the sustainable use of living natural resources, such as using existing farmland and ponds rather than clearing natural forest or natural habitat, culturing only native or approved species, keeping grazing out of protected and natural forest, and not financing fishing gear or facilities that increase pressure on overexploited fish stocks.
ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Formal recognition of Indigenous Peoples, commonly referred to in Indonesia as Masyarakat Hukum Adat (MHA), generally requires an administrative determination through a regional regulation or a decision of the relevant regional head. Because this process may be lengthy, communities that meet the substantive characteristics of Indigenous Peoples may remain unrecognized, creating a risk that their presence and customary rights are not adequately considered.	Identify potentially affected Indigenous Peoples through field-based social assessment and verification, without relying solely on formal administrative recognition. Undertake meaningful consultation in a culturally appropriate manner and obtain Free, Prior, and Informed Consent (FPIC) in the circumstances specified under ESS7. Establish a Stakeholder Engagement Framework to support their participation in project planning, implementation, monitoring, and evaluation.
ESS8: Cultural Heritage	Chance Find Procedures for archaeological objects, historical structures, or sites discovered during construction are not consistently included as mandatory provisions in civil works contracts.	Include explicit Chance Find Procedures and operational guidance in the ESMF and bidding and contractual documents. These procedures will guide contractors, suppliers, and village authorities in stopping work, securing the site, notifying the competent authorities, and resuming work only after authorization when cultural heritage is encountered during Project SEHATI infrastructure activities.

Applicable Environmental and Social Standard (ESS)	Identified Regulatory or Implementation Gap	Measures to Address the Gap
ESS10: Stakeholder Engagement and Information Disclosure	The national framework does not consistently require project proponents to engage all relevant stakeholders, particularly project-affected parties and vulnerable or disadvantaged groups, in a systematic and continuous manner throughout the project cycle, from planning and implementation through monitoring and evaluation.	Prepare and implement a Stakeholder Engagement Framework (SEF) that sets out stakeholder identification and analysis, differentiated engagement methods, disclosure arrangements, an engagement schedule, and institutional responsibilities at the national, district, and village levels. Establish an accessible and inclusive project grievance mechanism that remains operational from project preparation through project closure.

Note: *The gap statements are framed as project-level observations for ESMF purposes and should be validated against the latest applicable laws, implementing regulations, and institutional arrangements during project preparation and implementation.*

4. Environmental and Social Context

4.1. Population

According to Badan Pusat Statistik (BPS), the population of Indonesia in the mid-year 2026 is 287,198,383 people spreading across its 38 provinces. Over 54% of the population remain densely clustered within the island of Java and in 2022 BPS recorded that 120,250,024 people live in rural areas in Indonesia. In 2023, WHO reported that the massive bulk of the population remains inside the productive workforce age (15–64), accounting for approximately 79.8% from the total population.

Indonesia has 84,291 villages/subdistricts. 15.38% of the villages/subdistricts are located in the coastal areas. According to forest location, 3.61% of the villages/subdistricts are located inside the forest.

4.2. Economy, Income and Employment

Indonesia has just been promoted to an upper-middle-income country. Economic growth is largely driven by strong domestic consumption and commodity exports, such as coal, palm oil, and nickel and downstream processing for the electric vehicle supply chain. While the main source of income of the majority population in the villages/subdistricts comes from agriculture (80.50%), industry (7.11%) and services (12.39%). The agriculture sectors in villages/subdistricts vary from food crops (38,148 villages/subdistricts), estate crops (21,336 villages/subdistricts), horticultural crops (3,674 villages/subdistricts), fishery (3,646 villages/subdistricts), forestry (343 villages/subdistricts), livestock (318 villages/subdistricts) and agricultural services (267 villages/subdistricts). According to BPS-Statistics Indonesia in 2018, the Micro, Small, and Medium Enterprises (MSMEs)/ UMKM in village/subdistrict level covers leather goods manufacturing, wood product manufacturing, precious metals and metal products industry, woven products manufacturing, pottery, ceramics, and stone industry, textile and weaving industry, food and beverage industry, and other industries.

Indonesia has also ecotourism potentials which not only could support the local economy but also to maintain the environmental, and socio-cultural sustainability. There are several ecotourism destinations in Indonesia which are already established and proven its positive contributions to the local communities and environment conservations such as Komodo National Park in East Nusa Tenggara for its Komodo Dragon conservatory, Bunaken National Marine Park for providing rich Indonesian tropical water ecosystem, and Panglipuran Village in Bali with its traditional *adat* village.

Despite macroeconomic stability, employment remains a challenge: approximately 60% of the workforce operates in the informal sector, lacking robust labor protections, minimum wage guarantees, or comprehensive social security. The average minimum wage in 2026 is IDR 3,390,000. In 2026, the poverty rate in Indonesia is 8.07% from the total population. In the village/subdistrict levels, the poverty rate is 10.67% from the total population. Indonesia's unemployment rate in 2026 is 4.68%.

4.3. Access to Electricity

According to official data from the Ministry of Energy and Mineral Resources (ESDM), Indonesia's national electrification ratio reached 98.53% in 2025. The un-electrified households belong to the 1.47% are located in remote, frontier, and outermost regions (known as 3T areas). These 3T areas are now the government's priority as Indonesia targets full electrification by 2029. The power sector remains heavily reliant on fossil fuels although the Indonesian government has started to increase renewable energy configurations (EBT) from Hydroelectric power plants, bioenergy, geothermal, solar, and wind.

One villages/subdistricts potential to the renewable energy contribution is the Micro Hydro Power Plant (MHPP) which can be installed in the off-grid areas with certain environmental conditions especially with consistent and powerful current/streams. In 2025, the Ministry of Energy and Mineral Resources (MoEMR) established two MHPPs; one in East Sumba in East Nusa Tenggara and one in Arfak Mountain in West Papua. National Research and Innovation Agency (BRIN, 2026) states that MHPP could also contribute to supporting micro and small businesses in the local communities by providing an affordable energy resource.

4.4. Health

Indonesia operates BPJS Kesehatan as its Universal Health Coverage (UHC) scheme, known as Indonesia's National Health Insurance (*Jaminan Kesehatan Nasional/*JKN) which has covered over 280 million people (more than 90% of the population) in the year 2026. Primary care relies on a massive network of 10,504 subdistrict community health centers (*Pusat Kesehatan Masyarakat*/Puskesmas). Puskesmas is a primary-level healthcare facility that organizes and coordinates promotive, preventive, curative, rehabilitative, and/or palliative health services, prioritizing promotive and preventive services in its working area (Law No. 17/2023 concerning Health). They handle basic treatments, immunizations, and maternal care, filtering patients before they are referred to larger regional hospitals.

In the smaller scale, Indonesia also has local health posts (*Pos Pelayanan Terpadu*/Posyandu). It is operated by volunteers in the local communities in village/district level or the lower levels in community and neighborhood units (RT/RW) with the guidance of Puskesmas staff. Posyandu provides several services including basic medical check-up and health awareness campaigns.

WHO (2023) reports that the life expectancy at birth in Indonesia is 68.3 years. In Indonesia, non-communicable diseases such as cardiovascular diseases, diabetes, and cancers are in the top causes of death. The second place covers communicable, maternal, perinatal and nutritional conditions.

4.5. Education

According to a BPS report in 2025, the average education level in Indonesia is 9.41 years, meaning that the typical citizen only completes a junior high school education. With its geographical conditions as an archipelagic state, Indonesia faces massive challenges in providing equal access to education. The problems occur in the 3T areas (frontier, outermost, and disadvantaged) where there is limited access to modern facilities and qualified teachers. This leads to the gap between the average education levels between rural (8.17 years) and urban (10.23 years) areas.

BPS records (2023) that the average percentage of elementary school graduates in the cities and villages/subdistricts has reached 97.83%. It also records 90.44% as the average percentage of junior high school graduates in the cities and villages/subdistricts. However, the number is lower for the average percentage of senior high school graduates in the cities and villages/subdistricts which is only 66.79%. Furthermore, Kompas (2024) reports that the number of diploma and bachelor's degree graduates in the cities is 75.34% and that it was only 24.66% in the villages/subdistricts and that the gap is quite massive for this level.

The data from BPS records that more than 42,000 village/subdistrict heads are senior high school graduates. The data also shows that as many as 338 village/subdistrict heads in six provinces did not even go to schools.

4.6. Gender Issues

BPS (2026) reports that In 2025, Indonesia has made significant changes in the Gender Inequality Index that has consistently shown better improvement from 2020 to 2025. Indonesia's Gender Inequality Index has decreased from 0.472 in 2020 to 0.402 in 2025. The index measures three dimensions across reproductive health, empowerment and labor market. The index shows 0.235 for the proportion of ever-married women aged 15–49 who gave birth to their first live-born child before the age of 20. It also shows that the percentage of women's participation in government institutions is still lower (22.28%) than men's (77.72%). A significant gap also occurs between the percentage of women's labor force participation rate (56.63%) and men's (84.40%).

The 2024 National Survey on Women's Life Experiences (SPHPN) reveals that one in four women aged 15–64 has experienced physical and/or sexual violence. Such cases are more frequently found among women living in urban areas, those with higher education, and those who are employed. In their *Lembar Fakta Catatan Tahunan,* The National Commission on Violence against Women or Komnas Perempuan (2025) reports that there are 376,529 cases of Gender-based violence (GBV) against women. The cases of sexual violence contribute the most number as many as 22,848 cases. Two other areas are physiological abuse with 15,727 cases and physical abuse with 14,126 cases.

4.7. Indigenous People, Culture and Land

There are 2,512 Indigenous communities throughout Indonesia. It also is estimated that the number of Indigenous Peoples in Indonesia stands at between 50 and 70 million individuals. Indigenous communities in Indonesia have established the country's largest Indigenous advocacy group, the *Aliansi Masyarakat Adat Nusantara (AMAN)* in 1993. Some of the most prominent and visible Indigenous groups include the Dayak of Kalimantan, the Toraja of Sulawesi, the Mentawai of Sumatra, the Baduy of West Java, and hundreds of distinct tribal groups across the Papua region.

The Ancestral Domain Registration Agency *(Badan Registrasi Wilayah Adat*/BRWA) as an organization in Indonesia that registers and maps customary (indigenous) territories records that in 2026, indigenous communities are found in 2,079 villages with the total areas of 36,658,260.14 hectares. In their statistics, BRWA reveals that there are 169 customary forests and one communal forest (*hutan ulayat*). Indonesia's Constitutional Court Decision No. 35/PUU-X/2012 establishes that customary forests are no longer classified as state forests; instead, they hold the status of forests owned by the

respective customary law communities. However, customary forests are under threat from forest fires and large-scale corporate concessions, particularly for palm oil plantations, mining, and industrial logging.

According to the data presented by the Language Development and Fostering Agency (Badan Bahasa) in 2026, Indonesia has 718 regional languages which are spoken by various indigenous communities and ethnic groups. These languages are mostly used in the daily interactions among the members of local communities. The country has more than 600 ethnic groups spreading across the archipelago, making it a melting pot of cultures, traditions, and customs.

4.8. Biophysical Environment, Natural Hazards and Climate Change

Geography and biodiversity. BPS (2025) data shows that the total area of Indonesia is 8,300,000 square kilometers in which 77% of the areas are Indonesian waters. The country has 17,024 islands reported and verified by the United Nations. Indonesia shares borders with Malaysia in Borneo Island, Papua New Guinea in Papua Island and East Timor in Timor Island. The equator cuts through some of the Indonesian islands including Sumatra, Kalimantan, Sulawesi and Papua. Located on the equator between Indian and Pacific Oceans, Indonesia has a tropical climate. The climate supports the country's rich biodiversity, including extensive tropical rainforests and marine ecosystems. The area of Indonesia's tropical rainforests reaches approximately 1.10 million square kilometers. Indonesia's endemic fauna comprises 270 species of mammals, 386 species of birds, 328 species of reptiles, 204 species of amphibians, and 280 species of fish.

Given this rich biodiversity, some SEHATI villages may be located near sensitive ecosystems such as forests, mangroves, peatlands and coral reefs. As detailed biodiversity assessment is not practical at the proposal stage, activities will be screened for biodiversity risks, and those with potential impacts will be further assessed by environmental specialists. The Biodiversity Screening Procedure (BSP) and Biodiversity Management Plan (BMP) are provided in this ESMF as a basis for the technical guidelines and the Project Operations Manual (POM). Because SEHATI villages are located in very different landscapes, the rest of this section summarizes, in proportion to the Project's small and dispersed investments, the environmental conditions that most affect the screening and design of village investments, the areas where these conditions are most relevant, and the national data sources that district teams and village facilitators can use to assess them for a given district or village.

Climate and climate change. Indonesia has two main seasons: a dry season, generally from April to October, and a rainy season from November to March. However, climate change has made significant disruptions in the two-seasons cycle, impacting the seasonal patterns. According to the National Research and Innovation Agency (BRIN) and the Meteorology, Climatology, and Geophysics Agency (BMKG), rising sea surface temperatures are driving volatile, erratic weather patterns. Dry seasons would be hotter that could trigger forest/land fires. And sometimes, the rainy season could last longer with a wetter climate triggering landslides and floods. The timing of rain also varies widely across the country: BMKG divides it into about 699 seasonal zones (Zona Musim) with different onsets and lengths of the dry season (BMKG, 2022). Year-to-year variation is strong: BMKG classified the El Niño that developed from mid-2026 as strong and expected a drier-than-normal dry season, with the highest drought risk in NTT, NTB, Bali, coastal Java and southern Sumatra (BMKG, June 2026).

Agro-ecological settings. SEHATI villages fall into a few broad settings, each with typical farming systems and typical environmental issues:

- **Irrigated lowlands** (mainly Java, Bali and the main rice plains of Sumatra, Sulawesi and Nusa Tenggara) grow wet rice (sawah) and horticulture on alluvial and volcanic soils, among dense settlements. Java alone produced about 53% of Indonesia's rice in 2024, and South Sulawesi and Lampung have the largest harvested rice areas outside Java (BPS, 2025). The main pressures here are competition for irrigation water, the use of agrochemicals, flooding, and the conversion of farmland to other uses.
- **Humid uplands and tree-crop areas** (much of Sumatra, Kalimantan, Sulawesi and Papua) are used for dryland food crops and estate crops such as rubber, coffee, cocoa, coconut and oil palm. Most upland soils here are acidic and of low fertility: acid dryland covers about 108.8 million ha, mostly in Sumatra, Kalimantan and Papua (Mulyani and Sarwani, 2013), and about 51 million ha of land has slopes steeper than 30% (Mulyani and Hidayat, 2009). Erosion is common on this land, and the expansion of farms and plantations puts pressure on nearby forest and other natural habitat.
- **Highlands,** generally above 700 m, cover about 29.5 million ha of dryland, mostly in Papua (about 7.2 million ha), Kalimantan (6.8 million ha) and Sumatra (5.4 million ha), with about 1.5 million ha in Java and Bali (Haryati, 2014). Volcanic highlands follow the volcanic arc through Sumatra, Java, Bali, Nusa Tenggara, North Sulawesi and North Maluku. Their soils, mainly Andosols formed from volcanic ash, are fertile and are farmed intensively for vegetables (for example in Karo, Lembang, Dieng, Sembalun and Bolaang Mongondow), tea and coffee; eruptions can also damage farmland, as when the 2013–2014 Sinabung eruption affected about 51,000 ha (Sukarman and Dariah, 2014; Haryati, 2014). Highlands outside the volcanic arc, including most of those in Kalimantan and Papua, generally have more acidic, less fertile soils, like the humid uplands above (Mulyani and Sarwani, 2013). In both types, much of the farmland is on steep slopes, where erosion remains very high and soil conservation is often not applied (Haryati, 2014).
- **Seasonally dry areas** (mainly NTT and NTB, and parts of East Java, Bali, South Sulawesi, Gorontalo and East Kalimantan) are dry-climate uplands with less than 2,000 mm of rain a year and a long dry season, covering about 13.3 million ha (Mulyani and Sarwani, 2013). In Nusa Tenggara, about 4.9 million ha of such land, with five to ten dry months, is used mainly for rainfed maize on shallow, stony soils, where water scarcity is the main constraint (Mulyani and Suwanda, 2019). Drought and land degradation are recurring problems.
- **Peat and swamp lowlands** (Sumatra, Kalimantan and Papua) cover about 33.7 million ha, mostly in Sumatra (12.3 million ha), Kalimantan (11.8 million ha) and Papua (9.6 million ha); about half of this swamp land is peat and about a tenth is floodplain dominated by acid sulfate soils. Rice, oil palm and other crops are grown on drained peat and swamp soils, but drainage makes peat subside, flood and burn, acid sulfate soils are difficult to farm, and rising sea levels bring salinization (World Bank, 2021).
- **Coasts and small islands** support fisheries, aquaculture, seaweed farming and coastal tourism. Indonesia has about 3.36 million ha of mangroves, and a further 756,000 ha of potential mangrove habitat has no mangrove cover (Ministry of Environment and Forestry, National Mangrove Map 2021). Coastal lowlands face erosion, tidal flooding and land subsidence (see below), and on small islands fresh water is limited by small catchments and by seawater entering wells (Hadi et al., 2005).

Natural hazards. Indonesia also faces massive challenges in mitigating other cases of environmental degradations and natural hazards. Indonesia is an infamous earthquake-prone region sitting in the "Ring of Fire" with 127 active volcanoes. It is recorded by The Ministry of Energy and Mineral Resources (*Kementerian Energi dan Sumber Daya Mineral*/ESDM) that there have been 11 volcanoes

that are constantly erupting in 2026. Earthquakes, tsunamis and eruptions can destroy infrastructure, but hydrometeorological disasters are far more frequent. In 2025 BNPB recorded more than 3,100 disasters, mostly floods (about 1,600), extreme weather (about 660) and forest and land fires (about 550); more than 1,500 people died and about 10 million were displaced (BNPB, as reported in December 2025). Landslides are common on steep, cleared or cultivated slopes, and coastal villages face abrasion and tidal flooding.

Water stress and groundwater. Water is plentiful in Indonesia overall but unevenly spread. Bappenas places Java, Bali and Nusa Tenggara in a water-stressed zone, while Sumatra, Kalimantan, Sulawesi and Papua still have a surplus (Bappenas, 2019). In the dry season, and more so in El Niño years, villages in these regions and on small islands face shortages of drinking and irrigation water, and BMKG issues drought early warnings by district. Many villages rely on wells and boreholes. Indonesia has 421 groundwater basins (cekungan air tanah, CAT), set by Presidential Decree No. 26/2011 and mapped by Badan Geologi with their conservation zones. Heavy pumping lowers water tables, dries shallow wells and springs and, in coastal lowlands, draws in seawater. Badan Geologi measured land subsidence of 6–10 cm a year along the north coast of Central Java, and more than 10 cm a year in Semarang, mainly because young clay soils are still compacting; groundwater pumping may make it worse (Badan Geologi, 2020).

Air quality. Air quality in most rural areas is better than in cities; the national air quality index (IKU) was 90.13 in 2024, above its target of 84.5 (BPS, 2025). The air quality problems that matter in SEHATI villages are local or seasonal: smoke haze from forest and land fires in the dry season, especially in Sumatra and Kalimantan; open burning of crop residues and waste; dust from unpaved roads, quarries and construction; and smoke and dust from biomass dryers, smokehouses, rice and feed mills and generators. In the 2026 dry season, smoke from forest and land fires again affected parts of Sumatra and Kalimantan: on 27 August 2026, visibility fell to about 1 km in Pontianak and 1.2 km in Palangka Raya, and air quality in some areas was in the unhealthy to very unhealthy range (Ministry of Forestry, 2026). Fires also burned in Papua, Java and Sulawesi in 2026 (see Forest and land fires below). Air quality stations (ISPU) are mostly in cities, so village-level air quality data are rarely available.

Deforestation and land degradation. The Ministry of Forestry (2024) reports net deforestation in Indonesia of 175,400 hectares, higher than in previous years. The main drivers of deforestation are land use change (logging, mining, urbanization, and palm oil plantations) and forest and land fires. About 12 million ha of land is classified as critical land (*lahan kritis*) by the Ministry of Forestry (2025), much of it on sloping uplands and in degraded watersheds. On farmland, the main problems are erosion on steep slopes, loss of organic matter and nutrients from continuous cropping and heavy fertilizer use, compaction, and acid or saline soils. Drained peat subsides and becomes prone to fire, tidal swamp soils release acid when drained, and coastal fields are affected by salt water. Former mining land and abandoned plantations are common in some districts.

Forest and land fires. Indonesia has about 13.4 million ha of peat soils, mainly in Sumatra (5.8 million ha), Kalimantan (4.5 million ha) and Papua (3.0 million ha), within peat hydrological units (KHG) covering about 24 million ha (Ministry of Agriculture peat map, as cited by Pantau Gambut). Drained peat burns easily and for a long time in dry years. The area burned varies with the climate: about 2.6 million ha in 2015, 1.65 million ha in 2019, 1.16 million ha in 2023 and 0.38 million ha in 2024 (SiPongi, Ministry of Forestry). In 2026, a strong El Niño year, SiPongi indicated about 202,000 ha burned between January and July. Fires in 2026 were not limited to Sumatra and Kalimantan. In Papua, about

33,800 ha burned between January and July, most of it in South Papua (about 25,800 ha, mainly in Merauke) (SiPongi, as reported by Tirto, October 2026). In East Java, fires affected 14 mountain areas during the dry season, including Semeru, where about 1,900 ha had burned by early September, and Bromo (BNPB and BPBD East Java, September 2026). In Sulawesi, about 2,400 ha burned in Southeast Sulawesi by July (BPBD Southeast Sulawesi), about 1,500 ha in South Sulawesi by June (SiPongi) and about 450 ha in Central Sulawesi by mid-August 2026 (BPBD Central Sulawesi). By 30 August 2026, the Ministry of Forestry had carried out 4,801 fire suppression operations covering 38,829.46 ha; this is the area handled by suppression teams, which is only part of the area burned. The provinces with the highest fire risk are Riau, Jambi, South Sumatra and West, Central, South and East Kalimantan; grassland and savanna fires also occur in the dry season in Nusa Tenggara.

Data sources. Information on these conditions for a given district or village is available from national sources: disaster hazard and risk maps (InaRISK, BNPB) and district disaster risk assessments (BPBD); landslide, volcanic hazard and groundwater basin maps (Badan Geologi); seasonal outlooks, drought warnings and fire danger ratings (BMKG); river basin and irrigation data (BWS/BBWS and PU SDA); hotspot and burned-area data (SiPongi, Ministry of Forestry); forest cover and critical land maps (Ministry of Forestry); peat hydrological unit maps and air quality data (ISPU) (Ministry of Environment); soil and land resource maps (Ministry of Agriculture); district environmental reports (DIKPLHD); and village potential data (Podes, BPS). District teams and village facilitators can use these sources when preparing and screening village proposals.

4.9. Public Transportation, Communication, and Information

Indonesia’s transportation system is a multimodal network combining land transit, extensive maritime ferry routes, and regional air travel to connect its vast archipelago of over 17,000 islands. While major islands like Java and Sumatra feature developed rail and highway networks, inter-island connectivity nationwide relies on passenger ferries and an expansive domestic aviation sector. In the capital city, the availability of public transportation has covered all areas in Jakarta. BPS (2025) shows that 79.72% of villages/subdistricts in Indonesia have access to public transportation.

Communication in Indonesia has evolved rapidly, driven by the archipelago's unique geography and a massive, tech-savvy population. Today, it is defined by a mobile-first digital culture, intense social media engagement, and ongoing infrastructure expansion. Television remains a powerful mass communication medium for news and entertainment, though traditional print media has largely shifted online. The data presented by BPS (2026) shows that 77.63% of the population in Indonesia have access to the internet and 70.75% of the population have access to mobile phones. BPS also reveals that 87.97% of the villages/subdistricts have access to 5G/ 4G/ LTE signals. Nevertheless, 4.12% of the villages/subdistricts still have no access to telecommunication signals.

While communication facilities in the big cities in Indonesia are available in almost every area, BPS reports that the number of communication facilities in the rural areas are still limited. Only 7.71% of villages/subdistricts have a post office/sub-post office/post house. 7.27% of villages/subdistricts have mobile postal service. These numbers trigger the increase of private communication facility providers in villages/subdistricts. The data shows that there are private expedition service providers in 16.76% of villages/subdistricts in Indonesia.

4.10. Security

Indonesia is considered a safe country with a moderate crime level. According to the mid-year Numbeo Safety Index, Indonesia holds a moderate national safety score of 53.6 out of 100 (with a Crime Index of 46.4). BPS records that there were 561,993 crimes in 2024 in which most crimes happened in DKI Jakarta, North Sumatera and East Java provinces. The most common offenses are opportunistic property crimes, specifically aggravated theft and residential/hotel break-ins; street crime such as pickpocketing and mobile phone snatch-and-grab robberies from passing motorbikes (especially in high-density areas of Jakarta and tourist hubs in Bali); financial fraud, including credit card skimming at unverified ATMs and drink-spiking and methanol poisoning from bootleg or unregulated alcohol in budget nightlife venues.

In general, the crime rate in the big cities is higher than that in the village/subdistricts as it is shown from BPS data released in 2025. The number of city residents who are victims of crime reaches 68.91%, whereas the number of village/subdistrict residents falling victim to crime is lower (31.09%)

The four main security threats in Indonesia are terrorism, civil unrest, high-risk regional insurgencies, and severe natural disasters. Extremist plots predominantly target police stations, government offices, and local places of worship. Major cities like Jakarta, Surabaya, and Bandung regularly see large-scale labor, economic, or political protests. Major demonstrations can cause severe infrastructure disruption, public transit shutdowns, and localized clashes with security forces. At the moment, several areas in Papua provinces present severe, life-threatening risks including armed clashes between the military and militant groups, targeted road ambushes (particularly near industrial mining projects like Timika), and a distinct threat of kidnapping, specifically targeting non-Papuan citizens.

4.11. Village Government

Indonesia's village government system is an autonomous local governance framework regulated primarily under Law No. 6/2014 on Villages (Undang-Undang Desa). Under this law, a village (desa) is recognized as an autonomous legal entity rather than just a subordinate administrative division of a district. This system empowers communities to self-govern, manage local budgets, and preserve ancestral traditions. The system operates through specific structures, funding mechanisms, and democratic institutions.

The village authority is split into executive and legislative/consultative branches to maintain a system of checks and balances. Kepala Desa (Village Head) as the executive branch is directly elected by villagers. They serve as the chief administrator responsible for day-to-day operations, public services, budget execution, and village development programs. The Village Consultative Body (*Badan Permusyawaratan Desa*/BPD) as the legislative branch represents the community, formulates and approves village regulations (*Peraturan Desa* or Perdes) alongside the Kades, and oversees executive performance. The highest decision-making authority in the village system is the *Musyawarah* Desa (Musdes), or Village Consultative Meeting involving Kades, BPD, and community representatives.

Villages receive direct financing through multiple channels. Dana Desa (National Village Fund). It is direct budget allocations transferred from the central state budget (APBN) straight to village bank accounts. Villages also receive village fund allocation (*Alokasi Dana Desa*/ADD), regional funds shared by the district or municipal government (APBD). Other than those two channels, villages also manage Pendapatan Asli Desa (PADesa) which is local revenue generated independently by the village, such as through village-owned enterprises known as BUM Desa.

5. Potential Environmental and Social Risk Impacts and Standard Mitigation Measures

5.1. General Assessment

The overall Environmental and Social (E&S) Risk for the SEHATI project is rated as **Substantial**. This rating reflects the broad and geographically dispersed nature of the proposed investments, alongside varying local implementation capacities and E&S screening systems that have yet to be demonstrated in practice. If unmanaged, these operational complexities could cause implementation delays that jeopardize the achievement of the Project Development Objective (PDO). To directly mitigate these vulnerabilities, high E&S risk investments are explicitly excluded from the project's menu of eligible activities. Exclusion list is developed and attached in the ESMF document as an instrument to exclude proposed investments with high E&S risks. Furthermore, the CPMU has prepared all required E&S risk management instruments prior to appraisal, and the project will finance regular, targeted E&S risk management training for Central Project Management Unit (CPMU) staffs to ensure robust execution throughout the implementation lifecycle.

In parallel, the risk related to Stakeholder Engagement is also classified as Substantial. Impact assessments from previous community-driven development initiatives highlight a significant risk of elite capture during development planning processes at the village level. The SEHATI project addresses this challenge by strengthening the role of local communities across every phase—extending involvement from early planning through subproject implementation and completion oversight. The project places a dedicated focus on women and youth as key stakeholders, establishing institutional processes that reinforce the traditional accountability mechanisms of village leaders. These mechanisms will be operationalized through structured community feedback loops and binding funding conditionalities, ensuring that local governance remains inclusive, transparent, and responsive to all community members including vulnerable groups.

5.2. Environmental and Social Risks Assessment

Table 7. SEHATI E&S Risks Assessment

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
Green Agroprocessing							
1	SEHATI-AGP-C-001	Construction of Village Product Processing Production Building/House	Component 1	Soil disturbance, dust and construction waste during construction; wastewater and organic effluent from processing (e.g., cassava, palm sugar or coconut) with high BOD/COD, requiring treatment before discharge; solid organic waste (e.g., peels, pulp, shells) that can generate methane and odor if not managed; dust and particulate matter from drying and milling operations; energy combustion emissions from biomass or LPG burners (ESS3).	Apply the construction ESCOP (dust control, waste segregation, no open burning); separate stormwater from process water and install a simple wastewater treatment system (screens and grease/solid traps, settling tanks, septic tank with biofilter, biodigester) before any discharge, meeting MoE Regulation No. 5/2014 (as amended), using the sector appendix that matches the product (ESCOP 3) standards; manage sludge and monitor wastewater quality as required by the ESMP (UKL-UPL/SPPL); compost or biogas-convert organic solid waste, store it covered and remove it daily, with no open burning or dumping; cover drying floors or use enclosed dryers to reduce dust; use improved-efficiency burners or solar dryers to minimize combustion emissions.	Workers are exposed to heat stress, repetitive strain injuries, and respiratory hazards; risk of elite capture of cooperative membership; food safety risk to end consumers (ESS2, ESS4).	Enforce mandatory use of Personal Protective Equipment (PPE); provide ergonomic rest breaks; ensure inclusive membership of BUMDes/cooperatives; conduct food safety and Good Manufacturing Practice (GMP) training for all operators.
2	SEHATI-AGP-C-002	Procurement of Agricultural/Plantation Commodity Drying Machine	Component 2	Smoke and particulate emissions from fuel- or biomass-fired dryers; dust from drying and handling dried commodities; fuel and oil spills and used oil from engine-driven dryers; energy consumption from dryer operation; noise from fans and motors (ESS3).	Prioritize solar dryer domes; where fuel- or biomass-fired dryers are used, keep them efficient, well maintained and fitted with chimneys; enclose or ventilate drying and handling areas to reduce dust; refuel on impermeable surfaces with drip trays and transfer used oil to the supplier or a licensed B3 waste collector; engines and generators meet the engine emission standard (MoEF Regulation No. 11/2021); choose right-sized, energy-efficient	Burns from hot surfaces; accidents involving moving parts; thermal runaway risk in battery components; noise disturbance to the community during installation (ESS2, ESS4).	Install safety guards on all rotating and hot parts; schedule noisy installation activities to avoid children's rest and study hours; enforce mandatory use of appropriate PPE; provide operator safety training prior to commissioning.

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
					dryers; maintain fans and motors and operate them away from houses.		
3	SEHATI-AGP-C-003	Procurement of Commodity Cleaning, Peeling, and Sorting Machine	Component 2	Organic solid waste (peels, seeds, rejected produce) that can cause odor and pests if not managed; wash water with moderate BOD and soil particles; noise from machine operation; energy and water consumption (ESS3).	Compost organic waste on-site, use it as animal feed or supply it to a biogas digester, and remove it daily; treat wash water through screens and a settling tank before discharge, with no untreated discharge; reuse rinse water where hygienic; select low-noise, energy- and water-efficient machines and maintain them regularly; operate noisy equipment away from houses.	Hand and finger injuries from cutting blades; ergonomic strain from repetitive motions; noise-induced hearing loss; risk of child labour at peak processing seasons (ESS2, ESS4).	Install blade guards and emergency stop buttons on all machines; provide anti-fatigue mats and enforce worker rotation schedules; require hearing protection in high-noise areas; implement the Labour Management Procedure (LMP), including minimum age requirements and a prohibition on child labour.
4	SEHATI-AGP-C-004	Procurement of Commodity Grinding/Milling/Shredding Machine	Component 2	Dust and fine particulate matter from grinding and milling; noise and vibration from mills and shredders; husks, bran and other milling residues; energy or fuel consumption and used oil from diesel-powered mills (ESS3).	Enclose or ventilate milling areas and fit dust covers or collectors; place mills on vibration mounts away from houses and operate them during daytime; reuse husks and bran as animal feed, compost or fuel in efficient dryers fitted with chimneys, with no open burning; choose right-sized, energy-efficient mills; refuel diesel mills on impermeable surfaces and transfer used oil to the supplier or a licensed B3 waste collector; engines and generators meet the engine emission standard (MoEF Regulation No. 11/2021).	Inhalation of fine dust causing occupational lung disease; noise-induced hearing damage; risk of entrapment in machinery; starch/flour dust explosion hazard (ESS2, ESS4).	Require N95 respirator masks and earmuffs for all operators; install machine guards and interlocks; conduct dust-explosion hazard training; post standard operating procedures and emergency response plans at all workstations.
5	SEHATI-AGP-C-005	Procurement of Product Packaging and Sealing Machine	Component 2	Emissions from packaging material production if plastic is used; plastic packaging waste from cutting and sealing scraps, rejected packs and used packaging; energy consumption from heat sealers and printing equipment; potential chemical residue from printing inks on food-contact packaging; used	Prioritize recyclable, reusable or biodegradable packaging and optimize packaging design to reduce waste; collect plastic scraps and rejected packs and send them to TPS3R or waste banks, with no open burning; use food-safe inks and keep SDS for all chemical consumables; choose right-sized, energy-efficient machines; return used	Burns from heat-sealing elements; repetitive strain injuries; risk to consumer health if food safety standards are not met (ESS2, ESS4).	Install heat shields on sealing elements; enforce job rotation to reduce repetitive strain; ensure all packaging materials are food-grade certified; provide labelling compliance training for operators.

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
				lubricants from machine maintenance (ESS3).	lubricants to the supplier or an authorized B3 waste collector.		
6	SEHATI-AGP-C-006	Procurement of Cold Storage/Chiller for Fresh and Processed Products	Component 2	Refrigerant leakage (ozone-depleting HCFCs, or HFCs with high global warming potential); energy consumption from cooling equipment; noise from compressors and condensers; spoiled products and packaging waste from power outages or poor stock management; end-of-life refrigeration equipment as e-waste (ESS3).	Use non-ODS, low-GWP refrigerants and have units installed and serviced by trained technicians; check for leaks and keep a refrigerant log; choose well-insulated, energy-efficient units sized to need, with solar backup if possible; place compressors away from houses; compost spoiled products; return old units to the supplier or a licensed collector.	Entrapment and hypothermia risk for workers inside cold rooms; electrical hazards; noise disturbance to the surrounding community (ESS2, ESS4).	Install interior emergency door release mechanisms and audible alarms in all cold rooms; provide thermal PPE for cold-room workers; enforce lockout/tagout (LOTO) procedures for all electrical maintenance; install soundproofed compressor enclosures.
7	SEHATI-AGP-C-007	Construction of Raw Material and Finished Product Warehouse	Component 1	Soil disturbance, dust and runoff during construction; altered drainage and waterlogging around the building; contamination of stored products from pests, moisture or chemicals; fire risk from stored combustible materials and packaging (ESS3).	Apply the construction ESCOP (erosion and dust control, no open burning) and design site drainage to prevent waterlogging; install pest-proof, moisture-proof flooring, walls and ventilation, and apply FIFO/FEFO stock rotation; store chemicals separately from food products; install fire extinguishers, prohibit smoking and open flames, and prepare a simple emergency plan.	Structural collapse risk; fire hazard from stored commodities; inequitable community access to storage facilities; pest and rodent health risks to the surrounding community (ESS2, ESS4).	Commission a certified structural engineer for the design; ensure full building code compliance; install fire detection and suppression systems; establish a transparent, community-governed access policy; implement routine pest monitoring with community notification.
8	SEHATI-AGP-C-008	Construction of Agroprocessing Wastewater Treatment Plant	Component 1	Soil disturbance and runoff during construction of tanks and ponds; discharge of partially treated wastewater if the unit is undersized or poorly maintained; odor and flies from sludge and open units; leakage from unlined tanks contaminating soil and groundwater; sludge requiring safe handling (ESS3).	Size the unit to the expected wastewater volume and load, and keep rainwater out of the system; line tanks and ponds and site the unit away from wells, water bodies and houses; operate and maintain the unit, remove and treat sludge regularly (e.g., by drying or composting), and cover odorous units; meet MoE Regulation No. 5/2014 (as amended), using the sector appendix that matches the product (ESCOP 3) and monitor effluent quality as required by the ESMP (UKL-UPL/SPPL); apply the construction ESCOP during construction.	Community complaints regarding odour; downstream community health risk from inadequate treatment; occupational health and safety (OHS) risks for workers in confined spaces and excavations (ESS2, ESS4).	Conduct community consultation and establish an accessible Grievance Redress Mechanism (GRM); enforce mandatory OHS requirements for confined-space entry and excavation works; ensure the WWTP is operated by a qualified and trained operator; share monitoring results with the community.

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
9	SEHATI-AGP-C-009	Construction of Composter/Bio digester for Production Organic Waste	Component 1	Odor, flies and leachate from compost piles; methane and odor from improper composting; pathogen survival if composting temperature is not adequately managed; biogas leaks causing fire or explosion risk; digestate overflow contaminating soil and water (ESS3).	Use only segregated organic waste as feedstock; turn and monitor compost piles to reach thermophilic temperatures; cover compost and collect leachate; locate the facility at least 50 m from the nearest house, downwind and away from wells and water bodies; for biodigesters, use trained installers, check regularly for gas leaks, keep smoking and open flames away, fence the digester and train users on safe operation; store digestate in a lined, covered area and use it as fertilizer.	Odour nuisance to the surrounding community; risk of biogas accumulation causing toxic or explosive conditions; inequitable distribution of economic benefits; child safety risks near open composting areas (ESS2, ESS4).	Conduct community consultation on facility siting; implement transparent benefit-sharing arrangements; install safety fencing; provide operator safety training; post hazard signage in the local language; prohibit child access to the facility.
10	SEHATI-AGP-C-010	Procurement of Simple Quality Laboratory/Quality Testing Equipment	Component 2	Small quantities of laboratory chemicals and reagents that may contaminate soil and water if poured into drains; sample residues and used test consumables; e-waste and used batteries from testing equipment at end-of-life (ESS3).	Keep SDS and store chemicals in labeled, closed containers; collect used reagents and hazardous residues separately and hand them to an authorized B3 waste collector, with no disposal into drains; compost food sample residues; arrange take-back or licensed collection for e-waste and batteries.	Chemical exposure for laboratory workers; sharps injury risk; consumer harm from inaccurate testing results; equity risk preventing smallholder farmers from accessing testing services (ESS2, ESS4).	Require PPE (laboratory coat, gloves, safety glasses, and fume hood) for all chemical handling; provide eyewash stations and safety showers; conduct chemical safety training; develop and enforce quality testing protocols; ensure testing services are accessible and affordable for smallholder producers.
11	SEHATI-AGP-C-011	Construction of Clean Water Facility for Production	Component 1	Groundwater or surface-water abstraction that may reduce water available to other users and to aquatic habitats downstream; contamination of the water source from inadequate source protection; land disturbance and erosion during pipeline and reservoir construction (ESS3, ESS6).	Assess the water source before design, including dry-season yield and existing users, and obtain water-use approval where required; avoid large-scale groundwater extraction (E&S Screening Form item 1.3); where surface water is used, maintain downstream flow and agree water sharing with other users; protect the source area and install sanitary seals on wells; install water meters and reuse water where hygienic; inspect pipelines for leaks before commissioning; test water quality before use against the standard (MoH Regulation No. 2/2023) and periodically after that; apply the construction ESCOP and restore disturbed land after backfilling.	Competition over water sources; restriction of access; impacts on existing users; community health risks from water quality degradation; worker OHS risks; inequitable water distribution governance (ESS2, ESS4, ESS7).	Ensure equitable community access to the water supply; the village government should issue a Village Regulation (Perdes) establishing governance arrangements for water access and distribution to protect the rights of all community members.

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
12	SEHATI-AGP-C-012	Construction of Rooftop/Hybrid Solar Power Installation for Production Building	Component 1	Hazardous waste from batteries, inverters and panels at end-of-life; electrical fire risk from improper wiring, faulty inverters or batteries; roof damage if panels are installed on weak roofs; fuel use, emissions and used oil from the backup generator in hybrid systems (ESS3).	Engage certified installers and meet Indonesian electrical standards (PUIL); check the roof structure before installation; install fusing, grounding and lightning protection, and provide a ventilated battery room with a fire extinguisher; procure batteries and panels with a take-back or recycling arrangement; for hybrid systems, maintain the generator, refuel on impermeable surfaces and transfer used oil to the supplier or a licensed B3 waste collector; engines and generators meet the engine emission standard (MoEF Regulation No. 11/2021).	Community disturbance from installation noise and vibration; working-at-height hazards for installers; risk of thermal runaway in battery energy storage systems (BESS) causing toxic fire (ESS2, ESS4).	Schedule installation activities to minimise disturbance to children's rest and study hours; enforce mandatory full PPE (full-body harness, helmet, safety boots, electrical gloves) and lifelines for all roof work; locate the BESS in a dedicated, ventilated area with automatic fire suppression, separated from residential zones.
13	SEHATI-AGP-C-013	Construction of Village Product Marketing Kiosk/Gallery	Component 1	Soil disturbance, dust and construction waste during construction; solid waste and packaging litter from visitors and product display; energy consumption from lighting and display equipment; domestic wastewater if toilets or a kitchen are provided (ESS3).	Apply the construction ESCOP (dust control, waste segregation, no open burning); provide segregated waste bins and send recyclables to TPS3R or waste banks; use energy-efficient lighting, natural ventilation and solar power where feasible; treat domestic wastewater in a septic tank with biofilter, meeting MoE/BPLH Regulation No. 11/2025.	Elite capture and exclusion of small-scale producers; accessibility barriers; worker and community safety risks; lack of transparent pricing; inadequate representation for women and youth (ESS2, ESS4).	Establish an independent supervisory committee (BUMDes/cooperative) with broad community membership; implement a rotating display schedule with maximum stall allocations per producer; conduct open registration and selection through public notice boards; conduct targeted outreach to marginal groups through PKK and Karang Taruna networks.
14	SEHATI-AGP-S-001	Construction of Village Road/Production Road/Farm Access Road/Productive Access Route	Component 1	Soil erosion and sedimentation from earthworks and grading; loss of roadside vegetation; surface runoff changes and drainage disruption; dust generation affecting local air quality; noise and vibration from construction machinery; potential contamination from machinery fuel/oil spills; new access into natural forest or other natural habitat (ESS3, ESS6).	Apply the construction ESCOP and the ESCOP for village roads; follow existing tracks where possible, with no new road access into natural forest or conservation areas (SEHATI Exclusion List No. 4 and No. 15); install silt fences or sediment traps where runoff can reach streams or drains; replant or restore disturbed vegetation with native species; apply water-spray dust suppression on unpaved surfaces; schedule heavy machinery use during daylight hours only and keep noise and vibration at nearby houses within the limits in ESCOP 1; provide drip trays under	Temporary disruption to community access and movement; noise and dust disturbance to households; traffic accident risk (particularly for children); exclusion of marginal groups from road benefits; community concerns regarding the influx of outside workers; worker OHS risks (ESS2, ESS4).	Conduct inclusive community consultation; agree on temporary access routes and inform communities of the construction schedule; establish and publicise an accessible GRM; implement a traffic management plan with signage, speed limits, and flagmen; apply the LMP including OHS requirements, code of conduct, and prohibition of child and forced labour; ensure equitable access to road benefits for women, the elderly, and persons with disabilities.

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					parked machinery to prevent fuel/oil spills; design drainage (side and cross drains) to match natural catchment flows; buy sand, gravel and stone from established local building material suppliers, and do not take them directly from rivers, beaches or unlicensed pits (SEHATI Exclusion List No. 17); where fill is taken from a village borrow area agreed with the community, leave it safe and stable and backfill the pits.		
15	SEHATI-AGP-S-002	Construction of Village Bridge/Production Bridge/Economic Access Bridge	Component 1	Disturbance of riverbank stability and riparian vegetation during abutment construction; in-stream sedimentation and turbidity from excavation in or near watercourses; disruption of aquatic habitat and fish passage; risk of bank erosion at bridge ends if waterway geometry is altered; potential hydrocarbon pollution from in-stream machinery operation (ESS3, ESS6).	Apply the construction ESCOP; keep clearing of riverbank vegetation to a minimum and replant with native species; carry out in-stream work during low-flow periods and avoid fish spawning seasons where known; install silt screens, and cofferdams where needed, to isolate work areas from the watercourse; use manual or low-impact methods for in-stream work where possible; refuel machinery away from the river on a hard surface with drip trays and keep a spill kit on site; stabilize riverbanks with bioengineering (live-staking, coir rolls) after construction; design bridge span to pass flood flows without significantly altering stream geometry; remove all construction debris and temporary structures from the waterway before completion.	Loss of temporary river crossing access for residents; drowning hazard for workers in or near water; potential conflict if the bridge restricts water use or water traffic for other users; community health risk from increased turbidity affecting downstream drinking water sources (ESS2, ESS4).	Provide a safe temporary crossing (wooden bridge or raft) throughout the construction period; require all workers in or near water to wear life jackets under the supervision of a designated safety officer; consult downstream communities about water source protection measures; inform and involve fishing communities in the construction schedule to minimise livelihood disruption; equip the completed bridge with safety railings and sufficient width to accommodate all users, including motorcycles, pedestrians, and persons with disabilities.

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16	SEHATI-AGP-S-003	Construction of Culvert/Box Culvert/Productive Access Drainage	Component 1	Disruption of natural surface drainage patterns if culvert sizing is inadequate, causing upstream waterlogging or downstream flash flooding; erosion at culvert outfalls from concentrated flow; excavation-induced soil disturbance and sedimentation (ESS3).	Apply the construction ESCOP; size culverts in the DED to carry flood flows, and never smaller than the existing channel; install energy dissipators (riprap aprons) at culvert outlets to reduce erosion; carry out works in the dry season or at low flow and use sediment traps; compact and stabilize disturbed soil immediately after installation; ensure culvert invert is set at the same level as the natural channel bed to maintain aquatic connectivity; keep culvert inlets and outlets clear of debris, especially after heavy rain.	Short-term access disruption during trench excavation; open trenches creating fall and injury hazards for residents; risk of property flooding if drainage is not adequately designed (ESS4).	Install physical barriers and warning signs around all open trenches; backfill and compact trenches immediately after culvert installation; identify and avoid impacts to private assets and access routes during the design phase; manage temporary access interruptions or minor asset impacts in accordance with the Land Access Procedure (LAP); redesign or relocate the activity if impacts cannot be managed within the LAP framework.
17	SEHATI-AGP-S-004	Construction of Boat Mooring/Multi-purpose Small Jetty	Component 1	Disturbance of seabed or riverbed sediment and aquatic habitat during pile driving or mooring installation; risk of mangrove or seagrass damage if structure is sited in sensitive coastal areas; potential oil/fuel spills from watercraft using the facility; floating debris and litter accumulation around the mooring area (ESS3, ESS6).	Site mooring facility away from mangroves, seagrasses and coral reefs, and not inside or within 1 km of a conservation area or marine conservation area (SEHATI Exclusion List No. 4); obtain KKPRL or other required approvals for coastal or river structures; use pre-fabricated components to minimize in-water disturbance; work at low tide and in the calm season, avoiding fish spawning periods where known, and use silt curtains where feasible; do not take coral, sand or mangroves for construction; keep a spill kit and a simple spill response procedure at the jetty; install waste collection bins and clear floating debris regularly; enforce fuel handling procedures to prevent spills.	Conflict with existing water users (traditional fishers, boat owners) over access to the mooring area; drowning risk during construction and operation; limited access for women and the elderly to waterfront livelihood activities if facility design is not inclusive; boat collision injuries with the dock structure; risks associated with ESS7 if traditional or indigenous fishing communities use the area (ESS2, ESS4, ESS7).	Conduct multi-stakeholder consultation, including women and fishing communities, before siting and design; provide life-saving equipment (life rings, life jackets) at the facility; design the facility with non-slip surfaces, handrails, and safe vessel boarding and alighting arrangements for all users; establish clear facility use rules and safety protocols posted conspicuously at the facility; involve traditional and indigenous fishing communities in facility governance if they use the area, in accordance with ESS7.
18	SEHATI-AGP-S-005	Construction of Clean Water Facility/Productive Water Network	Component 1	Risk of groundwater over-abstraction and depletion of water table affecting other users; contamination of water source from improper pipeline installation or inadequate source protection zone; land disturbance and erosion during pipeline and reservoir	Assess the water source before design, including dry-season yield and existing users, and obtain water-use approval where required; avoid large-scale groundwater extraction (E&S Screening Form item 1.3); where surface water is	Inequitable water access disadvantaging women, remote households, or low-income families if distribution is not planned together with the community; inter-village or inter-group water conflict if a shared source is over-allocated;	Identify all existing water users and potential upstream/downstream users; conduct consultations regarding allocation and access arrangements; establish transparent and equitable water use rules;

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				construction; potential changes to downstream flow regime if surface water source is used (ESS3, ESS6).	used, maintain downstream flow and agree water sharing with other users; establish a protection zone around the source and prohibit contaminating activities within it; install sanitary seals on wells and inspect pipelines for leakage before commissioning; test water quality before use against the standard (MoH Regulation No. 2/2023) and periodically after that; apply the construction ESCOP and restore all disturbed land along pipeline routes immediately after backfilling.	waterborne disease risk if the system is poorly maintained; OHS risks for workers installing pipes in trenches (ESS2, ESS4, ESS10).	provide an accessible GRM for water use disputes.
19	SEHATI-AGP-S-006	Construction of Solar Power Plant Installation/Renewable Energy Lighting	Component 1	Land clearing and impermeable surface increase if ground-mounted panels are installed (rooftop preferred to avoid this); generation of hazardous battery waste at end-of-life, particularly lead-acid batteries; risk of electrical fire from improper wiring or faulty inverters; glare from panels if poorly oriented (ESS3).	Prioritize rooftop installations to avoid land clearing; where panels are ground-mounted, use already cleared land and keep grass cover under the panels; engage only certified solar installers complying with Indonesian electrical standards (PUIL); procure batteries and panels with a manufacturer take-back or disposal plan and document disposal; install lightning protection, appropriate fusing and grounding on all systems; provide a ventilated battery room with a fire extinguisher; orient panels to avoid glare towards houses and roads; conduct electrical safety inspection before commissioning.	Electrical shock risk for untrained residents who tamper with the system; inequitable electricity access if distribution does not cover all households; social tension if the solar system is controlled by a small elite group; child safety risk near battery arrays if inadequately enclosed (ESS2, ESS4).	Establish a transparent and inclusive village energy committee to govern the solar system; ensure all battery installations are housed in locked, ventilated, and enclosed spaces inaccessible to children; use only certified electricians for installation; require safety training as a condition of handover to village operators; document and publicly announce the electricity distribution plan to ensure equitable access; include women residents as members of the operations and maintenance committee.
20	SEHATI-AGP-S-007	Construction of Warehouse/Storage Facility for Products and Equipment	Component 1	Soil disturbance and compaction during construction of the warehouse foundation; altered surface drainage and potential waterlogging around the structure; dust from construction earthworks; potential contamination of stored agricultural products from pests or chemicals if ventilation and sanitation are inadequate;	Design foundation and site drainage to prevent waterlogging; apply the construction ESCOP (erosion, sediment and dust control); install pest-proof flooring, walls and ventilation in the warehouse; keep the warehouse clean and rotate stock (FIFO/FEFO); separate storage areas for chemicals/pesticides from food products; install fire	Worker injuries from manual handling (musculoskeletal disorders) during loading and unloading of heavy goods; fire hazard for workers and neighbouring households; inequitable access to storage facilities if dominated by one group; risk of theft or post-harvest losses if the facility is insecure (ESS2, ESS4).	Provide manual handling training and mechanical aids (trolleys, ramps) for warehouse workers; install smoke detectors and clearly mark emergency exits; establish a transparent, multi-stakeholder warehouse management committee with women farmer representation; implement access control and inventory management procedures;

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				fire risk from stored combustible materials (ESS3).	extinguishers and develop a fire evacuation plan; prohibit smoking and open flames inside the facility.		register the facility in the village asset register with a maintenance plan.
21	SEHATI-AGP-S-008	Procurement of Three-Wheel Transport Vehicle/Village Product Box Vehicle	Component 2	Exhaust emissions (CO, NOx, particulates) and noise from the vehicle engine contributing to local air and noise pollution; risk of fuel or oil spills during refueling or maintenance; inappropriate disposal of used lubricants and tires (ESS3).	Ensure vehicle meets national emissions standards and undergoes regular scheduled maintenance, keep the muffler in working order, and keep vehicles more than three years old within the in-use emission standard (MoEF Regulation No. 8/2023); consider electric or low-emission models where available; use designated refueling areas with drip trays; transfer used oil to the supplier or a licensed B3 waste collector; return used tires to the supplier or a recycler, and do not burn them; document vehicle maintenance log; avoid idling engines in populated areas to reduce unnecessary emissions.	Traffic accidents involving vehicles, pedestrians, and other road users; driver OHS risks from prolonged vibration and road hazards; risk of the vehicle being monopolised by elite community members to the exclusion of target beneficiaries; community conflict over vehicle scheduling and use priorities (ESS2, ESS4).	Require all drivers to hold a valid licence and complete defensive driving training; establish and publicise village-managed vehicle scheduling and usage rules; conduct routine vehicle safety inspections; install road safety signage at frequently used locations; ensure the vehicle is accessible for use by women and other marginal groups on fair and transparent terms.
22	SEHATI-AGP-S-009	Construction of 3R Waste Management Facility/Waste Bank/Waste Management Unit	Component 1	Odor nuisance from decomposing organic waste if collection and processing is inadequate; leachate from waste storage contaminating soil and groundwater; risk of vector (flies, rats) breeding in accumulated waste; dust and particulate matter from waste sorting activities; potential contamination from improperly handled hazardous household waste (ESS3).	Line waste storage areas with impermeable material; install drainage, and leachate collection where organic waste is processed or held; implement an integrated pest management plan; separate organic waste for composting and prevent uncovered storage of rotting material; sort waste under a roof and keep the sorting area clean to limit dust; provide guidance to the community on segregation of hazardous waste (batteries, medicines) for separate handling, store it separately at the facility and hand it to a licensed B3 collector; for sites that process or hold organic waste, locate the facility at least 50 m from the	Odour and sanitation complaints from neighbouring households; OHS risks for waste bank workers (infection, cuts, dust inhalation), especially informal sorters; social stigma associated with waste work if predominantly performed by low-income groups; community conflict over facility siting (NIMBY); (ESS2, ESS4).	Conduct community consultation, including with neighbouring households, before selecting the facility site; establish an accessible GRM for odour and disturbance complaints; provide full PPE (gloves, boots, dust mask, high-visibility vest), OHS training, and hepatitis B vaccination for waste workers; design a transparent and equitable waste bank benefit-sharing scheme; ensure women and youth can become waste bank members and share in its economic benefits.

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					nearest house and downwind of it; for waste banks holding only dry waste, keep at least 10 m from any well; keep all sites away from wells, rivers and flood-prone land; send residual waste to the district landfill (TPA); no open burning.		
23	SEHATI-AGP-S-010	Procurement of Digital System for Production, Stock, and Transaction Recording	Component 2	Electronic waste (e-waste) from obsolete hardware requiring proper disposal; energy consumption from devices and network equipment (ESS3).	Procure energy-efficient devices (Energy Star or equivalent); establish an e-waste collection and disposal procedure aligned with Indonesian hazardous waste regulations (GR 22/2021); avoid disposing of batteries or electronics in ordinary village waste; include take-back arrangements for batteries and devices in procurement contracts.	Exclusion of residents with low digital literacy or without access to devices; data privacy risk if village data is stored or shared improperly; risk that digital system benefits accrue only to already-advantaged parties (ESS4, ESS10).	Provide inclusive digital literacy training for women, the elderly, and youth; develop offline backup procedures for all critical functions; implement data protection and privacy safeguards in accordance with the Electronic Information and Transactions (ITE) Law and World Bank requirements; ensure all residents can access system outputs in plain language, including printed summaries where necessary.
Aquaculture and Fisheries							
24	SEHATI-AKP-C-001	Construction of Fish Cultivation Pond/Biofloc System	Component 1	Water quality degradation from excess feed, fish excreta and uneaten pellets increasing nitrogen, phosphorus and BOD in the pond water and downstream waterways; risk of invasive species escape if non-native fish species are cultured; loss of wetland or floodplain area if new ponds are excavated; potential use of antibiotics and chemicals in fish health management causing residues in the environment (ESS3, ESS6).	Prioritize existing or idle ponds, with no conversion of mangroves, wetlands or other natural habitats (SEHATI Exclusion List No. 15); implement a pond water management plan with scheduled partial water exchange and effluent settling before discharge; use feeding management to minimize unconsumed feed; stock native or already-established species; use non-native species only with a risk assessment, escape-prevention measures and approval from the competent authority (SEHATI Exclusion List No. 6); never stock species prohibited under MMAF Regulation No. 19/2020, and screen pond inlets and outlets to prevent escape; apply biosecurity measures and prohibit introduction of untreated fish from outside sources;	Risk of waterborne disease transmission to the community if contaminated pond water is discharged near drinking water sources; income disparity if pond use is concentrated in a few households; drowning hazard, particularly for children near ponds; OHS risks for workers handling chemicals and fish farming equipment; risk of child labour in fish farming activities (ESS2, ESS4).	Install fencing or barriers around ponds accessible to children; provide life-saving equipment near all ponds; ensure pond allocation and benefits are managed by an inclusive village aquaculture group with women's membership; train fish farmers in safe chemical handling (PPE, storage, and disposal); test water quality at community water sources around ponds quarterly; implement the LMP, including a prohibition on child labour in aquaculture activities.

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					minimize use of antibiotics, use only registered fish medicines as advised by fisheries officers, with no banned antibiotics, and maintain treatment records; monitor pond effluent water quality as required by the ESMP (UKL-UPL/SPPL), meeting MoE/BPLH Regulation No. 1/2025 where shrimp are cultured.		
25	SEHATI-AKP-C-002	Procurement of Fish Cage/Floating Net for Fishery Cultivation	Component 2	Land conversion for cage construction and associated infrastructure; disruption of water flow and aquatic habitats in rivers or lakes due to cage placement; dissolved oxygen depletion and algal bloom risk from cage fish waste in enclosed water bodies; risk of disease spread within cage clusters to wild fish populations (ESS3, ESS6).	Follow the zoning and carrying capacity set by the fisheries or environment office for the water body, and do not place cages in, or within 1 km of, protected areas (SEHATI Exclusion List No. 4); maintain minimum distances between cages and between cages and the shoreline; place shore facilities on already cleared land, with no conversion of mangroves or wetlands; establish a mandatory feeding management protocol; use certified disease-free seed, remove dead fish daily and report unusual fish deaths to the fisheries office; monitor water quality regularly (e.g., water color, and dissolved oxygen where a meter is available) and as required by the ESMP (UKL-UPL/SPPL); implement regular cage cleaning and avoid anchoring in aquatic vegetation beds.	Conflict with other water users (irrigation, transportation, fisheries) over access to the water body; drowning risk for cage workers operating above water without life jackets; exclusion of traditional fishers from productive water areas; risk of large economic losses for small cage farmers from disease outbreaks; (ESS2, ESS4, ESS7).	Map all existing water body users and agree on spatial zoning through participatory consultation before cage installation; require all workers on water to wear life jackets and work in pairs; involve traditional and indigenous fishers in cage governance and ensure they are not displaced from their customary fishing areas; establish an early warning system for fish disease and a community-based emergency response protocol; provide information on community-based insurance options for fish cage farmers.
26	SEHATI-AKP-C-003	Construction of Fish Hatchery/Seed Production Unit	Component 1	Hatchery effluent with high ammonia and BOD; risk of disease spread from hatchery stock to wild populations through water discharge; use of disinfectants and other chemicals in hatchery management; escape of non-native broodstock or fry; land clearing for hatchery construction, particularly in coastal areas (ESS3, ESS6).	Treat hatchery effluent through settling or biological filtration before discharge and locate the discharge point away from community water intakes; apply biosecurity (source water treatment, quarantine of incoming broodstock); use only approved aquaculture chemicals and keep usage records; culture native or already-established species, with	Displacement of or loss of livelihoods for communities that traditionally use coastal or mangrove areas for fishing, wood gathering, or other purposes; risk of saltwater intrusion to adjacent freshwater agricultural land; food safety risk from antibiotic-resistant bacteria on shrimp or fish products; drowning and	Document and provide compensation or restoration of access for the loss of access to commonly used resources (ESS5); establish a buffer zone between shrimp ponds and freshwater agricultural land; implement an antibiotic use control programme and conduct residue testing on all harvest products; provide coastal workers with awareness training on

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					screened inlets and outlets; use non-native species only with a risk assessment and approval from the competent authority (SEHATI Exclusion List No. 6), and never species prohibited under MMAF Regulation No. 19/2020; site the hatchery on already cleared land, with no conversion of mangroves (SEHATI Exclusion List No. 15); monitor effluent quality as required by the ESMP (UKL-UPL/SPPL).	flooding risk from coastal hazards during construction; (ESS2, ESS4, ESS5, ESS7).	flooding and coastal storm hazards and develop an emergency response plan.
27	SEHATI-AKP-C-004	Procurement of Aeration System and Water Pump for Aquaculture	Component 2	Electricity or fuel consumption and emissions from aerators and pumps; noise from motors and generators; fuel and oil spills and used oil from diesel pumps; over-abstraction of surface water or groundwater for pond filling (ESS3).	Choose energy-efficient aerators and pumps and use solar power where feasible; maintain equipment and place generators and pumps away from houses; refuel on impermeable surfaces with drip trays and transfer used oil to the supplier or a licensed B3 waste collector; engines and generators meet the engine emission standard (MoEF Regulation No. 11/2021); size pumps to the sustainable yield of the water source, obtain water-use approval where required (E&S Screening Form item 1.3) and agree water-sharing rules with other users.	Risk of equipment (if distributed as community assistance or subsidy) being monopolised by large pond owners, group leaders, or individuals with local political connections; conflict over water use as high-capacity pumps can draw heavily from groundwater or surface water resources (ESS2, ESS4).	Establish objective eligibility criteria for assistance recipients (e.g., maximum pond area limit, prerequisite small-scale pond farmer status, special quota allocation for women and vulnerable groups); conduct a rapid hydrological carrying capacity assessment (groundwater and surface water availability) before approving pump specifications and capacities for distribution.
28	SEHATI-AKP-C-005	Construction of Tank/Reservoir and Aquaculture Water Network	Component 1	Soil disturbance and erosion during excavation and pipeline installation; abstraction from rivers, springs or groundwater that may reduce water for other users and for aquatic habitats downstream; leakage or overflow from tanks and channels; stagnant water creating mosquito breeding sites (ESS3, ESS6).	Assess water availability and existing uses before design, obtain water-use approval where required, and avoid large-scale groundwater extraction (E&S Screening Form item 1.3); where water is taken from rivers or springs, maintain downstream flow and agree water sharing with other users; apply the construction ESCOP (erosion and sediment control) and restore disturbed areas; line tanks and inspect pipelines for leaks; provide overflow outlets onto	Open water reservoirs attract children to swim, creating drowning hazards; failure of a constructed embankment (breach) can flood surrounding areas; stagnant water in the reservoir promotes mosquito proliferation (dengue/malaria risk); trench excavation for water networks and pipes will cut village roads, agricultural roads, or access to public facilities; risk of residents or vehicles falling into excavation pits (ESS2, ESS4).	Install a perimeter fence (minimum 1.5–2 m high) of material that is difficult to climb; install warning signs prohibiting entry and swimming with visual illustrations in the local language at all visible access points; introduce biological mosquito control agents such as larvivorous fish (e.g., tilapia, guppy) into the reservoir.

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					stable ground; cover tanks or manage edges to prevent mosquito breeding.		
29	SEHATI-AKP-C-006	Procurement of Mini Feed Mill/Fish Feed Processing Equipment	Component 2	Dust from grinding and mixing feed ingredients; odor and wastewater from processing fish-based or other organic ingredients; noise from mills and pelletizers; energy consumption; use of unsustainably sourced ingredients such as wild-caught fish (ESS3, ESS6).	Enclose or ventilate grinding and mixing areas; store ingredients covered and dry; treat any process wastewater before discharge, meeting MoE/BPLH Regulation No. 2/2026 where applicable; place machines away from houses and maintain them regularly; choose energy-efficient equipment; source ingredients legally and avoid fish from overexploited stocks or protected species.	OHS risks from machinery operation (dust and noise exposure, manual handling, electrical and fire safety hazards); feed safety risks; operator training requirements; equitable access to shared feed processing equipment (ESS2, ESS4).	Maintain a transparent booking system: Keep an open log (physical or digital) managed by the community for scheduling processing time, so that equipment is not monopolised by wealthier or larger-scale fish farmers; install a Local Exhaust Ventilation (LEV) hood directly above the mixing funnel and grinder to capture airborne particulates; position equipment away from residential areas.
30	SEHATI-AKP-C-007	Procurement of Ice Maker for Fishery Products	Component 2	Energy and water consumption from ice production; refrigerant leakage (ozone-depleting HCFCs, or HFCs with high global warming potential); wastewater and salt brine from ice production; noise from compressors (ESS3).	Use non-ODS, low-GWP refrigerants and have units serviced by trained technicians; inspect for leaks and keep a refrigerant log; recirculate ice production water where possible and discharge brine away from freshwater sources and farmland; insulate storage to reduce energy demand; site compressors away from houses to minimize noise nuisance.	Electrical and cold-system safety risks; cold temperature exposure for operators; water use impacts; operator competency requirements; equitable access for small-scale fishers; operational reliability and maintenance challenges (ESS2, ESS4, ESS7).	The vendor must provide operator training covering machine start-up and shut-down sequences, daily sanitation procedures, condenser cleaning, and recognition of abnormal compressor sounds; post ice harvest schedules and daily spare capacity on a public noticeboard so fishers can plan their departure times without having to queue for hours; implement a daily purchase limit per vessel during peak fishing seasons to prevent large commercial vessels or outside buyers from purchasing the entire daily ice production.
31	SEHATI-AKP-C-008	Procurement of Cold Storage/Freezer for Fishery Products	Component 2	Refrigerant leakage (ozone-depleting HCFCs, or HFCs with high global warming potential); energy consumption from freezing; wastewater and odor from thawing and cleaning; spoiled fish from power outages; noise from compressors (ESS3).	Use non-ODS, low-GWP refrigerants and have units serviced by trained technicians; inspect for leaks and keep a refrigerant log; choose right-sized, energy-efficient, well-insulated units and consider solar backup; drain cleaning and thaw water to a settling tank before discharge; compost spoiled fish or process it into fish meal; site compressors away from houses to minimize noise nuisance.	Cold temperature exposure for operators; refrigerant and electrical safety hazards; manual handling risks; emergency exit door safety; operational reliability and maintenance challenges; equitable access to cold storage capacity for small-scale fishers (ESS2, ESS4).	Provide certified cold-climate PPE for all cold-room operators; require vendor contracts to include a minimum 2-year warranty, quarterly preventive maintenance, and 24-hour emergency technician response; implement a transparent tariff and logbook system: post the daily storage rental tariff (per crate per day) publicly and record all storage transactions in an open logbook monitored by the joint fishers' cooperative management committee.

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32	SEHATI-AKP-C-009	Construction of Village-Scale Fish Processing Unit	Component 1	Wastewater from fish cleaning, smoking and processing with high BOD, oils and organic solids; smoke, polycyclic aromatic hydrocarbons (PAH) and particulate matter from traditional fish smoking; solid waste (guts, heads, scales) causing odor and pests; soil disturbance and dust during construction (ESS3).	Treat wastewater through screens, oil/grease traps and a settling tank or biofilter before discharge, with no untreated discharge, meeting MoE Regulation No. 5/2014 (as amended), Appendix XIV, and monitor effluent quality as required by the ESMP (UKL-UPL/SPPL); use improved smoking kilns that reduce fuel use and smoke, fitted with a chimney and sited downwind of and away from houses; compost fish offal or process it into fish meal or fertilizer, and remove it daily; install fly screens and pest control; apply the construction ESCOP.	Offal, scales, and fish bones discarded carelessly will attract flies, rats, and maggots and generate community rejection due to strong odours; village-scale processing industries often involve children below legal working age in fish cleaning tasks; inadequate worker sanitation facilities (toilets and handwashing stations) will trigger bacterial contamination of fish products; (ESS2, ESS4).	Construct a simple communal WWTP comprising at minimum a grease trap and a sedimentation or biofilter basin before discharge to the public drainage system; provide covered, waterproof waste bins in all production areas; establish and enforce strict rules prohibiting the employment of underage workers (minimum 18 years of age for hazardous work or work involving sharp tools).
33	SEHATI-AKP-C-010	Construction of Fish Landing Site/Small Boat Mooring	Component 1	Disturbance of seabed or riverbed sediment and aquatic habitat during construction; risk of mangrove, seagrass or coral damage if poorly sited; fuel and oil spills from boats; fish waste, wastewater and litter at the landing site causing odor and water pollution (ESS3, ESS6).	Site the facility away from mangroves, seagrass and coral reefs, and not inside or within 1 km of a conservation area or marine conservation area (SEHATI Exclusion List No. 4), and check coastal spatial suitability (KKPRL) where required; schedule in-water works at low tide and in the calm season, avoiding fish spawning periods where known, and use silt barriers where feasible; provide waste bins and collect fish waste daily for composting or fish meal; drain washing water to a settling tank; enforce fuel handling procedures and keep a spill kit.	Conflict with existing water users and fishers over access to the water body; navigation and drowning risks; access to the waterfront; customary use rights; worker safety during construction and operation; equitable access to the facility for all user groups (ESS2, ESS4).	Participatory spatial mapping: Conduct mapping exercises before construction with local fishers, customary leaders, and water transport operators to identify boat lanes, net deployment zones, and existing traditional mooring points; equip all catwalks and pontoons with non-slip flooring, sturdy handrails, and edge protection to prevent slipping into the water; physical zone separation: Separate the active boat mooring zone from traditional coastal use areas (such as household water access points, children's play areas, and recreational spaces) using floating barriers and clear zone signage.
34	SEHATI-AKP-C-011	Procurement of Laboratory/Water Quality Testing Kit	Component 2	Small quantities of test reagents and chemicals that may contaminate soil and water if poured into drains; used test consumables; e-waste and used batteries from meters and probes at end-of-life (ESS3).	Keep SDS and store reagents in labeled, closed containers; collect used reagents separately and hand them to an authorized B3 waste collector, with no disposal into drains or ponds; arrange take-back or licensed collection for e-waste and batteries.	Safe handling of test reagents; operator training requirements; correct interpretation and application of test results; equitable access to testing services; equipment maintenance requirements (ESS2, ESS4).	Enforce mandatory PPE (nitrile gloves and safety goggles) for all personnel handling chemical reagents, potentially contaminated water samples, or glass containers; provide standardised reading tools: ensure each test kit includes a clear colour comparison chart; implement the 'two-person rule' — two trained community health cadres must

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							independently read colorimetric results and reach agreement before results are recorded; provide visual job aids: supply each test kit with a laminated, fully illustrated step-by-step guide in the local language (Bahasa Indonesia or regional language) to prevent procedural errors in the field.
35	SEHATI-AKP-C-012	Construction of Wastewater Treatment Plant/Aquaculture Water Recirculation System	Component 1	Soil disturbance and runoff during construction of tanks and filters; discharge of nutrient-rich water if the system is undersized or poorly maintained; sludge from settling units and biofilters; energy consumption from pumps and aerators (ESS3).	Size the system to pond volume and stocking density; apply the construction ESCOP; operate and maintain filters and settling units, and remove and treat sludge regularly (e.g., by drying or composting); meet the applicable effluent standard (MoE/BPLH Regulation No. 1/2025 for shrimp ponds, otherwise MoE Regulation No. 5/2014, as amended) and monitor effluent quality as required by the ESMP (UKL-UPL/SPPL); use energy-efficient pumps and solar power where feasible.	Worker exposure to wastewater, pathogens, and chemicals; OHS risks during routine maintenance and confined space entry; safe access requirements; operator competency requirements; potential disturbance to the surrounding community from system failures; land access considerations (ESS2, ESS4, ESS5).	Enforce mandatory PPE (waterproof gloves, rubber boots, N95 mask, face shield) for all workers who come into contact with wastewater or sludge; install anti-slip grating on all wet floor surfaces and guardrails around open tanks; require a minimum of two workers for each confined space entry or maintenance task (buddy system with gas monitor); require operator competency certification before the system is handed over and commissioned; establish an accessible GRM so that surrounding communities can immediately report strong odours or leaks to the village head or WWTP operator.
36	SEHATI-AKP-S-001	Construction of Village Road/Production Road/Farm Access Road/Productive Access Route	Component 1	Soil erosion and sedimentation from earthworks and grading; loss of roadside vegetation; surface runoff changes and drainage disruption; dust generation affecting local air quality; noise and vibration from construction machinery; potential contamination from machinery fuel/oil spills; new access into natural forest or other natural habitat (ESS3, ESS6).	Apply the construction ESCOP and the ESCOP for village roads; follow existing tracks where possible, with no new road access into natural forest or conservation areas (SEHATI Exclusion List No. 4 and No. 15; Biodiversity Exclusion List X13, ESMF Annex V); install silt fences or sediment traps where runoff can reach streams or drains; replant or restore disturbed vegetation with native species; apply water-spray dust suppression on unpaved surfaces; schedule heavy machinery use during daylight hours only and keep noise and vibration at nearby houses within the limits in ESCOP 1; provide drip trays under parked machinery to prevent fuel/oil	Temporary disruption to community access and movement; noise and dust disturbance to households; traffic accident risk (particularly for children); exclusion of marginal groups from road benefits; community concerns regarding the influx of outside workers; worker OHS risks (ESS2, ESS4).	Conduct inclusive community consultation; agree on temporary access routes and inform communities of the construction schedule; establish and publicise an accessible GRM; implement a traffic management plan with signage, speed limits, and flagmen; apply the LMP including OHS requirements, code of conduct, and prohibition of child and forced labour; ensure equitable access to road benefits for women, the elderly, and persons with disabilities.

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					spills; design drainage (side and cross drains) to match natural catchment flows; buy sand, gravel and stone from established local building material suppliers and do not take them directly from rivers, beaches or unlicensed pits (SEHATI Exclusion List No. 17); where fill is taken from a village borrow area agreed with the community, leave it safe and stable and backfill the pits.		
37	SEHATI-AKP-S-002	Construction of Village Bridge/Production Bridge/Economic Access Bridge	Component 1	Disturbance of riverbank stability and riparian vegetation during abutment construction; in-stream sedimentation and turbidity from excavation in or near watercourses; disruption of aquatic habitat and fish passage; risk of bank erosion at bridge ends if waterway geometry is altered; potential hydrocarbon pollution from in-stream machinery operation (ESS3, ESS6).	Apply the construction ESCOP; keep clearing of riverbank vegetation to a minimum and replant with native species; carry out in-stream work during low-flow periods and avoid fish spawning seasons where known; install silt screens, and cofferdams where needed to isolate work areas from the watercourse; use manual or low-impact methods for in-stream work where possible; stabilize riverbanks with bioengineering (live-staking, coir rolls) after construction; design bridge span to pass flood flows without significantly altering stream geometry; remove all construction debris and temporary structures from the waterway before completion; refuel machinery away from the river on a hard surface with drip trays and keep a spill kit on site.	Loss of temporary river crossing access for residents; drowning hazard for workers in or near water; potential conflict if the bridge restricts water use or water traffic for other users; community health risk from increased turbidity affecting downstream drinking water sources (ESS2, ESS4).	Provide a safe temporary crossing (wooden bridge or raft) throughout the construction period; require all workers in or near water to wear life jackets under the supervision of a designated safety officer; consult downstream communities about water source protection measures; inform and involve fishing communities in the construction schedule to minimise livelihood disruption; equip the completed bridge with safety railings and sufficient width to accommodate all users, including motorcycles, pedestrians, and persons with disabilities.
38	SEHATI-AKP-S-003	Construction of Culvert/Box Culvert/Productive Access Drainage	Component 1	Disruption of natural surface drainage patterns if culvert sizing is inadequate, causing upstream waterlogging or downstream flash flooding; erosion at culvert outfalls from concentrated flow; excavation-induced soil disturbance and sedimentation (ESS3).	Apply the construction ESCOP; size culverts in the DED to carry flood flows, and never smaller than the existing channel; install energy dissipators (riprap aprons) at culvert outlets to reduce erosion; carry out works in the dry season or at low flow and use sediment traps; compact and stabilize disturbed soil immediately after installation; ensure	Short-term access disruption during trench excavation; open trenches creating fall and injury hazards for residents; risk of property flooding if drainage is not adequately designed (ESS4).	Install physical barriers and warning signs around all open trenches; backfill and compact trenches immediately after culvert installation; identify and avoid impacts to private assets and access routes during the design phase; manage temporary access interruptions or minor asset impacts in accordance with the LAP; redesign or

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					culvert invert is set at the same level as the natural channel bed to maintain aquatic connectivity; keep culvert inlets and outlets clear of debris, especially after heavy rain.		relocate the activity if impacts cannot be managed within the LAP framework.
39	SEHATI-AKP-S-004	Construction of Boat Mooring/Multi-purpose Small Jetty	Component 1	Disturbance of seabed or riverbed sediment and aquatic habitat during pile driving or mooring installation; risk of mangrove or seagrass damage if structure is sited in sensitive coastal areas; potential oil/fuel spills from watercraft using the facility; floating debris and litter accumulation around the mooring area (ESS3, ESS6).	Site mooring facility away from mangroves, seagrasses and coral reefs, and not inside or within 1 km of a conservation area or marine conservation area (SEHATI Exclusion List No. 4); obtain KKPRL or other required approvals for coastal or river structures; use pre-fabricated components to minimize in-water disturbance; work at low tide and in the calm season, avoiding fish spawning periods where known, and use silt curtains where feasible; do not take coral, sand or mangroves for construction; keep a spill kit and a simple spill response procedure at the jetty; install waste collection bins and clear floating debris regularly; enforce fuel handling procedures to prevent spills.	Conflict with existing water users (traditional fishers, boat owners) over access to the mooring area; drowning risk during construction and operation; limited access for women and the elderly to waterfront livelihood activities if facility design is not inclusive; boat collision injuries with the dock structure; risks associated with ESS7 if traditional or indigenous fishing communities use the area (ESS2, ESS4, ESS7).	Conduct multi-stakeholder consultation, including women and fishing communities, before siting and design; provide life-saving equipment (life rings, life jackets) at the facility; design the facility with non-slip surfaces, handrails, and safe vessel boarding and alighting arrangements for all users; establish clear facility use rules and safety protocols posted conspicuously at the facility; involve traditional and indigenous fishing communities in facility governance if they use the area, in accordance with ESS7.
40	SEHATI-AKP-S-005	Construction of Clean Water Facility/Productive Water Network	Component 1	Risk of groundwater over-abstraction and depletion of water table affecting other users; contamination of water source from improper pipeline installation or inadequate source protection zone; land disturbance and erosion during pipeline and reservoir construction; potential changes to downstream flow regime if surface water source is used (ESS3, ESS6).	Assess the water source before design, including dry-season yield and existing users, and obtain water-use approval where required; avoid large-scale groundwater extraction (E&S Screening Form item 1.3); where surface water is used, maintain downstream flow and agree water sharing with other users; establish a protection zone around the source and prohibit contaminating activities within it; install sanitary seals on wells and inspect pipelines for leakage before commissioning; test water quality	Inequitable water access disadvantaging women, remote households, or low-income families if distribution is not planned together with the community; inter-village or inter-group water conflict if a shared source is over-allocated; waterborne disease risk if the system is poorly maintained; OHS risks for workers installing pipes in trenches (ESS2, ESS4, ESS10).	Identify all existing water users and potential upstream/downstream users; conduct consultations regarding allocation and access arrangements; establish transparent and equitable water use rules; provide an accessible GRM for water use disputes.

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					before use against the clean water standard (MoH Regulation No. 2/2023) and periodically after that; apply the construction ESCOP and restore all disturbed land along pipeline routes immediately after backfilling.		
41	SEHATI-AKP-S-006	Construction of Solar Power Plant Installation/Renewable Energy Lighting	Component 1	Land clearing and impermeable surface increase if ground-mounted panels are installed (rooftop preferred to avoid this); generation of hazardous battery waste at end-of-life, particularly lead-acid batteries; risk of electrical fire from improper wiring or faulty inverters; glare from panels if poorly oriented (ESS3).	Prioritize rooftop installations to avoid land clearing; where panels are ground-mounted, use already cleared land and keep grass cover under the panels; engage only certified solar installers complying with Indonesian electrical standards (PUIL); procure batteries and panels with a manufacturer take-back or disposal plan and document disposal; install lightning protection, appropriate fusing and grounding on all systems; provide a ventilated battery room with a fire extinguisher; orient panels to avoid glare towards houses and roads; conduct electrical safety inspection before commissioning.	Electrocution risk for untrained community members interfering with the system; risk of inequitable benefit distribution if only certain households receive electricity access; social tension if PLTS is managed by a single elite group; child safety risk near battery banks if not properly enclosed (ESS2, ESS4).	Establish a transparent and inclusive village energy committee for governance of the PLTS; ensure all battery installations are in locked, ventilated enclosures inaccessible to children; engage only certified electricians for installation and require safety handover training for the village operator; document and publicize the electricity allocation plan to ensure equitable access; train female community members as part of the O&M committee.
42	SEHATI-AKP-S-007	Construction of Warehouse/Storage Facility for Products and Equipment	Component 1	Soil disturbance and compaction during construction of the warehouse foundation; altered surface drainage and potential waterlogging around the structure; dust from construction earthworks; potential contamination of stored agricultural products from pests or chemicals if ventilation and sanitation are inadequate; fire risk from stored combustible materials (ESS3).	Design foundation and site drainage to prevent waterlogging; apply the construction ESCOP (erosion, sediment and dust control); install pest-proof flooring, walls and ventilation in the warehouse; keep the warehouse clean and rotate stock (FIFO/FEFO); separate storage areas for chemicals/pesticides from food products; install fire extinguishers and develop a fire evacuation plan; prohibit smoking and open flames inside the facility.	Manual handling injuries (musculoskeletal disorders) for workers loading and unloading heavy items; fire hazard for workers and nearby households; inequitable access to storage if facility is controlled by a single group; theft or post-harvest loss risk if facility is poorly secured (ESS2, ESS4).	Provide manual-handling training and mechanical lifting aids (trolleys, ramps) for warehouse workers; install smoke detectors and clearly mark fire exits; establish a transparent multi-stakeholder management committee for the warehouse including women farmer representatives; implement access control and inventory management procedures; include the facility in the village asset register and maintenance plan.

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43	SEHATI-AKP-S-008	Procurement of Three-Wheel Transport Vehicle/Village Product Box Vehicle	Component 2	Exhaust emissions (CO, NOx, particulates) and noise from the vehicle engine contributing to local air and noise pollution; risk of fuel or oil spills during refueling or maintenance; inappropriate disposal of used lubricants and tires (ESS3).	Ensure vehicle meets national emissions standards and undergoes regular scheduled maintenance, keep the muffler in working order, and keep vehicles more than three years old within the in-use emission standard (MoEF Regulation No. 8/2023); consider electric or low-emission models where available; use designated refueling areas with drip trays; transfer used oil to the supplier or a licensed B3 waste collector; return used tires to the supplier or a recycler, and do not burn them; document vehicle maintenance log; avoid idling engines in populated areas to reduce unnecessary emissions.	Road traffic accidents involving the vehicle, pedestrians and other road users; OHS risk for the vehicle operator from prolonged vibration and road hazards; risk of vehicle capture by elite community members to the exclusion of targeted beneficiaries; potential community conflict over vehicle scheduling and use priority (ESS2, ESS4).	Require driver to hold valid license and undergo defensive driving training; establish and publicize a vehicle scheduling and usage policy managed by the village; conduct regular vehicle safety checks; include road safety signage in locations where the vehicle frequently operates; ensure the vehicle is available for use by women and other marginalized groups on equitable terms.
44	SEHATI-AKP-S-009	Construction of 3R Waste Management Facility/Waste Bank/Waste Management Unit	Component 1	Odor nuisance from decomposing organic waste if collection and processing is inadequate; leachate from waste storage contaminating soil and groundwater; risk of vector (flies, rats) breeding in accumulated waste; dust and particulate matter from waste sorting activities; potential contamination from improperly handled hazardous household waste (ESS3).	Line waste storage areas with impermeable material; install drainage, and leachate collection where organic waste is processed or held; implement an integrated pest management plan; separate organic waste for composting and prevent uncovered storage of rotting material; sort waste under a roof and keep the sorting area clean to limit dust; provide guidance to the community on segregation of hazardous waste (batteries, medicines) for separate handling, store it separately at the facility and hand it to a licensed B3 collector; for sites that process or hold organic waste, locate the facility at least 50 m from the nearest house and downwind of it; for waste banks holding only dry waste, keep at least 10 m from any well; keep all sites away from wells, rivers and flood-prone land; send residual waste to the district landfill (TPA); no open burning.	Odor and sanitation nuisance complaints from nearby households; OHS risks for waste bank workers (infections, cuts, inhalation of dust) especially informal sorters; social stigma attached to waste-work if mostly done by low-income groups; community conflict over siting of the facility (NIMBY opposition) (ESS2, ESS4).	Conduct community consultation including potential neighbors before selecting the facility site; establish GRM with accessible mechanism for odor/nuisance complaints; provide waste workers with full PPE (gloves, boots, dust masks, high-visibility vest), OHS training and hepatitis B vaccination; design a fair and transparent waste bank revenue-sharing scheme; ensure women and youth can participate as waste bank members and share economic benefits.

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45	SEHATI-AKP-S-010	Procurement of Digital System for Production, Stock, and Transaction Recording	Component 2	Electronic waste (e-waste) from obsolete hardware requiring proper disposal; energy consumption from devices and network equipment (ESS3).	Procure energy-efficient devices (Energy Star or equivalent); establish an e-waste collection and disposal procedure aligned with Indonesian hazardous waste regulations (GR 22/2021); avoid disposing of batteries or electronics in ordinary village waste; include take-back arrangements for batteries and devices in procurement contracts.	Digital exclusion of community members with low literacy or no device access; data privacy risks if village data is improperly stored or shared; risk that digital systems primarily benefit those already advantaged (ESS4, ESS10).	Provide digital literacy training inclusive of women, elderly and youth; design offline backup procedures for critical functions; apply data protection and privacy safeguards aligned with the ITE Law and World Bank requirements; ensure all community members can access the system's outputs in plain language (printed summaries where needed).
Green Ecotourism							
46	SEHATI-EKO-C-001	Construction of Nature Tourism Trail/Trekking Path/Boardwalk	Component 1	Soil disturbance and erosion from trail construction on sloped terrain; vegetation clearing that fragments wildlife habitat; runoff and sediment entering streams; litter accumulation along trails from visitors; noise disturbance to wildlife from visitor activity (ESS3, ESS6).	Follow existing paths where possible, keep trails narrow and minimize vegetation clearing; do not build trails in, or within 1 km of, protected areas, or in critical habitats (SEHATI Exclusion List No. 4), and where sites are near conservation areas or customary forests, agree zoning with the area manager and customary leaders; use raised boardwalks in wet, coastal or fragile areas; design trails along natural topographic contours to minimize erosion; use water bars, check dams and natural drainage crossings; restore disturbed vegetation with native plants; set a daily visitor limit agreed with the village and, near sensitive areas, with the area manager; install litter bins and enforce zero-litter policy; put up signs asking visitors to keep noise down and stay on the trail; restrict trail access during wildlife sensitive seasons (breeding/nesting) where known.	Visitor injury from falls on steep or poorly maintained trails; risk of the trail encroaching on community land or sacred sites without adequate consultation; inequitable benefit sharing if trail revenues are not distributed to the wider community; risk of marginalization of indigenous peoples living within or around the ecotourism area (ESS2, ESS4, ESS7).	Install safety signage, handrails on steep sections, and first-aid posts at key points; conduct culturally appropriate consultation and apply the IPPF; apply FPIC only where required by ESS7; establish a transparent revenue-sharing model for trail income with the village community; ensure indigenous peoples near the trail are consulted and participate in governance in accordance with ESS7; apply the LMP for trail construction workers.

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47	SEHATI-EKO-C-002	Construction of Information Center/Visitor Center for Tourism Village	Component 1	Land clearing and impermeable surface increase from building a tourist information center; construction waste generation; energy consumption from lighting, cooling and computing; wastewater from facility toilets and kitchen (ESS3).	Build on already cleared land more than 1 km from protected areas and outside critical habitats (SEHATI Exclusion List No. 4); minimize footprint through compact design; use permeable paving; source construction materials locally to reduce transport emissions; design for natural ventilation and daylight, and install energy-efficient LED lighting and solar panels; treat wastewater from toilets and kitchen in a septic tank with biofilter, meeting MoE/BPLH Regulation No. 11/2025, built to SNI 2398:2017 at least 10 m from any well; apply the construction ESCOP (waste segregation, no open burning).	Community exclusion if the information center is designed without input from local people; risk of elite capture of tourism revenue if the information center is managed by a single group; OHS risk for construction workers; risk of misleading or inflated tourism expectations from promotional materials (ESS2, ESS4).	Conduct inclusive community consultations on the design and content of the information center, including women and youth; establish a village-owned cooperative to manage the information center; apply the LMP for construction workers; present accurate, culturally respectful content developed with the community; post GRM contact information in a prominent location within the information center.
48	SEHATI-EKO-C-003	Construction of Tourist Toilet, Sanitation Facility, and Clean Water Supply	Component 1	Sewage and greywater from toilets and washing facilities contaminating soil, groundwater and nearby water bodies if not treated; water abstraction for the facility reducing supply to other users; soil disturbance and construction waste during construction; solid waste from visitors (ESS3).	Treat domestic wastewater in a septic tank with biofilter or connect to a communal IPAL, meeting MoE/BPLH Regulation No. 11/2025, with no untreated discharge; build septic tanks to SNI 2398:2017, at least 10 m from any well, and de-sludge regularly; assess the water source, obtain water-use approval where required (E&S Screening Form item 1.3), test the water against the drinking-water and hygiene-sanitation standards (MoH Regulation No. 2/2023) and install water-saving fixtures; apply the construction ESCOP; provide segregated waste bins.	Risk of sexual harassment or gender-based violence against women managing homestays who receive unknown guests; risk of low wages or exploitation of home-based workers (typically women) if tourism is controlled by outside tour operators; loss of privacy and social harmony if the scale of homestay operations grows beyond the community's comfort level; child safety risk in homestay environments (ESS2, ESS4, ESS7).	Provide gender-sensitive safety training for homestay operators, including how to set and enforce boundaries for guests; establish a community-managed visitor reception committee with women in leadership positions; develop and publicize a tourist code of conduct on mutual respect; prohibit child labor in homestay service activities in accordance with ESS2; ensure that indigenous peoples in the area are consulted in accordance with ESS7 before tourism is developed on their traditional land.
49	SEHATI-EKO-C-004	Construction of Gazebo/Shelter /Tourist Rest Area	Component 1	Vegetation clearing and soil disturbance during construction in natural areas; litter and plastic waste from visitors; visitor pressure on surrounding vegetation and wildlife; fire risk from visitor cooking or smoking in forested areas (ESS3, ESS6).	Site structures on already cleared land, more than 1 km from protected areas and outside critical habitats (SEHATI Exclusion List No. 4) and minimize vegetation clearing; use legally sourced materials; provide waste bins and regular collection; use marked paths and signs to keep visitors away from sensitive areas;	Risk of drowning, falls, and other accidents for tourists at natural sites; exclusion of local residents from access to their own traditional natural sites if entry fees are imposed without community consultation; risk of sexual harassment of female tourists; culturally	Install safety signage, lifebuoys, and first-aid equipment at all water-based attractions and elevated areas; design the entry-fee system through inclusive community deliberation, guaranteeing that local residents retain free or subsidized access; train tour guides on safe visitor management and emergency

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					prohibit open fires and provide fire extinguishers where needed.	insensitive behavior offensive to the community (ESS2, ESS4, ESS7).	procedures; develop and enforce a tourist code of conduct; consult indigenous peoples before developing attractions on their traditional land.
50	SEHATI-EKO-C-005	Construction of Observation Tower/Safe Photo Spot	Component 1	Vegetation clearing and soil disturbance for foundations, particularly on slopes or ridges; visual intrusion in natural landscapes; litter and visitor pressure around the tower; wildlife disturbance from visitors and noise (ESS3, ESS6).	Site the tower on already cleared land more than 1 km from protected areas and outside critical habitats and minimize the footprint; apply the construction ESCOP (erosion and slope protection); design the structure to blend with the landscape, using legally sourced materials; provide waste bins and signs asking visitors to keep noise down and stay on paths.	Tower collapse due to excessive visitor loading (crowding at a single point for photographs); fatal fall risk for construction workers building the tower, frame structure, or roof without fall-protection equipment (ESS2, ESS4).	Require the structural design (dynamic and static loads) to be certified by a licensed civil engineer. Ensure all workers use mandatory PPE: a full-body harness (attached to a lifeline), an OHS-compliant hard hat, and safety footwear.
51	SEHATI-EKO-C-006	Procurement of Signage, Interpretation Boards, and Wayfinding Equipment	Component 2	Minor vegetation clearing and soil disturbance when installing signs; use of treated timber or paints that may leach chemicals; waste from damaged or replaced signs (ESS3).	Install signs along existing paths and minimize vegetation clearing; use legally sourced, durable materials and low-toxicity paints; avoid excessive signage and visual clutter; remove and properly dispose of damaged signs; use signs to guide visitors away from sensitive habitats and to communicate rules on waste and wildlife.	Use of language not understood by all visitors; unclear signage that may cause visitors to become lost (ESS4).	Ensure directional signs are clear and durable under heat and rain, with easily understood language and large-format text.
52	SEHATI-EKO-C-007	Construction of Green Parking Area and Visitor Circulation Facility	Component 1	Land clearing and impermeable surfaces from parking construction; increased runoff and erosion; vehicle emissions, noise and dust on unpaved access roads; risk of wildlife vehicle strikes in natural areas (ESS3, ESS6).	Site parking on already cleared land more than 1 km from protected areas and outside critical habitats; use permeable paving (grass blocks, gravel) and provide drainage; apply the construction ESCOP; set speed limits and wildlife warning signs on roads through natural areas; gravel or pave critical sections to reduce dust; plant vegetation barriers; promote non-motorized or low-emission transport for last-mile access.	Parking area dominated by certain groups, creating village-level extortion through parking fees inconsistent with local government regulations (ESS4).	The green parking area shall be managed by the Village Government or a community cooperative for the broad benefit of the village community.

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53	SEHATI-EKO-C-008	Construction of 3R Waste Management Facility/Tourism Waste Bank	Component 1	Odor and flies from decomposing organic waste; leachate from waste storage contaminating soil and groundwater; windblown litter and plastic waste reaching natural areas and water bodies; vectors (flies, rats) breeding in accumulated waste (ESS3).	Where organic waste is processed or held, locate the facility at least 50 m from the nearest house and downwind of it; for a waste bank holding only dry waste, keep it at least 10 m from any well; keep all sites away from wells, rivers and flood-prone land; roof the facility, line storage areas and provide drainage, and leachate collection where organic waste is processed or held; separate organic waste for composting and do not leave rotting material uncovered; collect recyclables through the waste bank and send residual waste to the district landfill (TPA); implement pest control; no open burning.	Community opposition to the facility location due to concerns about odor, flies, and declining property values or aesthetic degradation in the tourism area; leachate contaminating groundwater; decomposition of organic waste generating ammonia/methane odors that disturb tourists; potential involvement of children (underage scavengers) within the facility area (ESS2, ESS4, ESS5, ESS7).	Conduct meaningful public consultation before site selection. Process organic waste in enclosed systems (e.g., drum composters or lidded bins). Install perimeter fencing and strictly prohibit children from scavenging or accessing areas with heavy machinery or sorting operations.
54	SEHATI-EKO-C-009	Construction of Solar-Powered Lighting for Tourism Area	Component 1	Hazardous waste from batteries and panels at end-of-life; light pollution disturbing wildlife such as nesting turtles, birds and bats; minor soil disturbance when installing poles; electrical fire risk from faulty batteries or wiring (ESS3, ESS6).	Procure lights with a take-back or recycling arrangement for batteries and panels; use shielded, downward-facing, warm-colored lights and avoid lighting nesting beaches and sensitive habitats; engage certified installers meeting Indonesian electrical standards (PUIL); minimize vegetation clearing when installing poles.	Electrocution risk for untrained community members who tamper with the system; risk of inequitable benefit distribution if only certain households receive electricity access; social tension if the solar power system (PLTS) is managed by a single elite group; child safety risk near battery banks if not properly enclosed (ESS2, ESS4).	Establish a transparent and inclusive village energy committee for PLTS governance; ensure all battery installations are in locked, ventilated enclosures inaccessible to children; engage only certified electricians for installation and require safety handover training for the village operator; document and publicize the electricity allocation plan to ensure equitable access; train female community members as part of the operations and maintenance committee.
55	SEHATI-EKO-C-010	Construction of Small Tourism Jetty/Tourist Boat Mooring	Component 1	Disturbance of seabed or riverbed sediment and aquatic habitat during construction; risk of mangrove, seagrass or coral damage from poor siting or anchoring; fuel and oil spills from tourist boats; litter around the jetty (ESS3, ESS6).	Site the jetty away from mangroves, seagrass and coral reefs, and not inside or within 1 km of a conservation area or marine conservation area (SEHATI Exclusion List No. 4), and check coastal spatial suitability (KKPRL) where required; use prefabricated components and schedule in-water works at low tide and in the calm season, avoiding fish spawning periods where known; install mooring buoys to prevent anchor	Conflict with existing water users (fishers, traditional boat owners) over access to the mooring area; drowning risk during construction and operation; restricted access for women and the elderly to waterfront livelihood activities if the facility design is not inclusive; risk of injury from boat-jetty collisions (ESS2, ESS4, ESS7).	Conduct multi-stakeholder consultations, including with women and fishing communities, before siting and design; provide life-saving equipment (lifebuoys, life jackets) at the facility; design the facility with non-slip surfaces, handrails, and safe boarding access for all users; establish clear user rules and safety protocols posted at the facility; engage

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					damage; enforce fuel handling procedures and keep a spill kit; provide waste bins at the jetty.		indigenous or customary fishing communities if they use the area (per ESS7).
56	SEHATI-EKO-C-011	Construction of MSME Kiosk/Local Product Display Area for Tourism	Component 1	Soil disturbance, dust and construction waste during construction; solid waste and packaging litter from visitors and product sales; domestic wastewater if toilets or food preparation are provided (ESS3).	Apply the construction ESCOP; provide segregated waste bins and send recyclables to TPS3R or waste banks; encourage reusable or recyclable packaging for products sold; treat domestic wastewater in a septic tank with biofilter, meeting MoE/BPLH Regulation No. 11/2025.	Kiosk allocation monopolized by village elites, relatives of local officials, or outside investors, while genuine local MSME operators are marginalized; construction of new kiosk areas on land currently used by informal street vendors, resulting in their loss of trading spaces and income (ESS4).	Develop transparent beneficiary/tenant selection criteria that prioritize genuine village residents. Avoid forced eviction. Where existing land is used, incumbent traders must be prioritized for occupancy in new kiosks without onerous conditions.
57	SEHATI-EKO-C-012	Procurement of Digital Ticketing and Information System	Component 2	Electronic waste (e-waste) from obsolete hardware and batteries; energy consumption from devices and network equipment (ESS3).	Procure energy-efficient devices; include take-back arrangements for batteries and devices in procurement contracts; hand e-waste to an authorized collector, with no disposal in ordinary village waste.	Risk of misinformation or disrespectful portrayal of local culture and indigenous knowledge in visitor-center materials; digital exclusion, accessibility barriers, affordability concerns, data privacy/security risks, lack of ticketing transparency and revenue accountability, limited alternative/offline access, inadequate operator training, and access barriers for visitors with disabilities (ESS4, ESS7).	Develop all interpretive materials in partnership with the community and in the local language; ensure indigenous communities' knowledge is credited and compensated per ESS7; design the center for universal accessibility (ramps, tactile guides); establish a village-owned entity to manage the center with women and youth in leadership roles. Provide a physical information desk where trained village staff can process digital tickets on behalf of walk-in visitors using community-owned devices. Configure the system to collect only strictly necessary information (e.g., ticket quantity and basic payment data); disable mandatory registration forms that request sensitive personal data (such as National ID numbers or home addresses) merely to purchase a basic entry ticket.

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58	SEHATI-EKO-S-001	Construction of Village Road/Production Road/Farm Access Road/Productive Access Route	Component 1	Soil erosion and sedimentation from earthworks and grading; loss of roadside vegetation; surface runoff changes and drainage disruption; dust generation affecting local air quality; noise and vibration from construction machinery; potential contamination from machinery fuel/oil spills; new access into natural forest or other natural habitat (ESS3, ESS6).	Apply the construction ESCOP and the ESCOP for village roads; follow existing tracks where possible, with no new road access into natural forest or conservation areas (SEHATI Exclusion List No. 4 and No. 15; Biodiversity Exclusion List X13, ESMF Annex V); install silt fences or sediment traps where runoff can reach streams or drains; replant or restore disturbed vegetation with native species; apply water-spray dust suppression on unpaved surfaces; schedule heavy machinery use during daylight hours only and keep noise and vibration at nearby houses within the limits in ESCOP 1; provide drip trays under parked machinery to prevent fuel/oil spills; design drainage (side and cross drains) to match natural catchment flows; buy sand, gravel and stone from established local building material suppliers and keep the receipts, and do not take them directly from rivers, beaches or unlicensed pits (SEHATI Exclusion List No. 17); where fill is taken from a village borrow area agreed with the community, leave it safe and stable and backfill the pits.	Temporary disruption of community access and movement during construction; noise and dust causing nuisance to nearby households; risk of road accidents involving project vehicles and community members, especially children; potential exclusion of marginalized groups from road benefits; concerns from labor influx if workers are recruited from outside the village; risk of worker injury from inadequate OHS management (ESS2, ESS4).	Conduct inclusive community consultations before construction and agree on temporary access routes; establish and publicize a GRM accessible to all; implement a traffic management plan with signage, speed limits, and flag persons near active worksites; apply the LMP including OHS requirements, codes of conduct, and prohibition of child/forced labor; ensure equitable access to road benefits for women, the elderly, and persons with disabilities.
59	SEHATI-EKO-S-002	Construction of Village Bridge/Production Bridge/Economic Access Bridge	Component 1	Disturbance of riverbank stability and riparian vegetation during abutment construction; in-stream sedimentation and turbidity from excavation in or near watercourses; disruption of aquatic habitat and fish passage; risk of bank erosion at bridge ends if waterway geometry is altered; potential hydrocarbon pollution from in-stream machinery operation (ESS3, ESS6).	Apply the construction ESCOP; keep clearing of riverbank vegetation to a minimum and replant with native species; carry out in-stream work during low-flow periods and avoid fish spawning seasons where known; install silt screens, and cofferdams where needed, to isolate work areas from the watercourse; use manual or low-impact methods for in-stream work where possible; refuel machinery away from the river on a hard surface with drip trays and keep a spill kit on site; stabilize riverbanks with bioengineering (live-staking, coir rolls)	Temporary loss of community crossing access with safety risks for pedestrians and livestock; drowning hazard for workers in or near the waterway; potential conflict if the bridge restricts water use or navigation by other community members; health risk from increased water turbidity affecting downstream drinking water sources (ESS2, ESS4).	Provide a safe temporary crossing (log bridge or ferry) during construction; ensure all workers in the water wear life jackets and are supervised by a safety officer; consult with downstream communities on water source protection measures; inform and engage fishing communities regarding construction timing to reduce livelihood disruption; fit the bridge with safety railings and adequate width for all users, including

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					after construction; design bridge span to pass flood flows without significantly altering stream geometry; remove all construction debris and temporary structures from the waterway before completion.		motorcycles and pedestrians with disabilities.
60	SEHATI-EKO-S-003	Construction of Culvert/Box Culvert/Productive Access Drainage	Component 1	Disruption of natural surface drainage patterns if culvert sizing is inadequate, causing upstream waterlogging or downstream flash flooding; erosion at culvert outfalls from concentrated flow; excavation-induced soil disturbance and sedimentation (ESS3).	Apply the construction ESCOP; size culverts in the DED to carry flood flows, and never smaller than the existing channel; install energy dissipators (riprap aprons) at culvert outlets to reduce erosion; carry out works in the dry season or at low flow and use sediment traps; compact and stabilize disturbed soil immediately after installation; ensure culvert invert is set at the same level as the natural channel bed to maintain aquatic connectivity; keep culvert inlets and outlets clear of debris, especially after heavy rain.	Short-term access disruption during trench excavation; open trenches creating fall or injury hazards for community members; potential property inundation if drainage is inadequately designed (ESS4).	Erect physical barriers and warning signs around all open trenches; backfill and compact trenches promptly after culvert installation; consult with community members likely to be affected by drainage changes before design is finalized; document and compensate any household property affected by temporary construction works.
61	SEHATI-EKO-S-004	Construction of Boat Mooring/Multi-purpose Small Jetty	Component 1	Disturbance of seabed or riverbed sediment and aquatic habitat during pile driving or mooring installation; risk of mangrove or seagrass damage if structure is sited in sensitive coastal areas; potential oil/fuel spills from watercraft using the facility; floating debris and litter accumulation around the mooring area (ESS3, ESS6).	Site mooring facility away from mangroves, seagrasses and coral reefs, and not inside or within 1 km of a conservation area or marine conservation area (SEHATI Exclusion List No. 4); obtain KKPRL or other required approvals for coastal or river structures; use pre-fabricated components to minimize in-water disturbance; work at low tide and in the calm season, avoiding fish spawning periods where known, and use silt curtains where feasible; do not take coral, sand or mangroves for construction; install mooring buoys so boats do not anchor on coral or seagrass; keep a spill kit and a simple spill response procedure at the jetty; install waste collection bins and clear floating debris regularly; enforce fuel handling procedures to prevent spills.	Conflict with existing water users (fishers, traditional boat owners) over access to the mooring area; drowning risk during construction and operation; restricted access for women and the elderly to waterfront livelihood activities if the facility design is not inclusive; risk of injury from boat-jetty collisions (ESS2, ESS4, ESS7).	Conduct multi-stakeholder consultations, including with women and fishing communities, before siting and design; provide life-saving equipment (lifebuoys, life jackets) at the multi-purpose jetty; design the facility with non-slip surfaces, handrails, and safe boarding access for all users; establish clear user rules and safety protocols posted at the multi-purpose jetty; engage indigenous or customary fishing communities if they use the area (per ESS7).

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62	SEHATI-EKO-S-005	Construction of Clean Water Facility/Productive Water Network	Component 1	Risk of groundwater over-abstraction and depletion of water table affecting other users; contamination of water source from improper pipeline installation or inadequate source protection zone; land disturbance and erosion during pipeline and reservoir construction; potential changes to downstream flow regime if surface water source is used (ESS3, ESS6).	Assess the water source before design, including dry-season yield and existing users, and obtain water-use approval where required; avoid large-scale groundwater extraction (E&S Screening Form item 1.3); where surface water is used, maintain downstream flow and agree water sharing with other users; install water-saving taps and toilets and size storage tanks for peak visitor days, so demand does not exceed what the source can supply; establish a protection zone around the source and prohibit contaminating activities within it; install sanitary seals on wells and inspect pipelines for leakage before commissioning; test water quality before use against the clean water standard (MoH Regulation No. 2/2023) and periodically after that; apply the construction ESCOP and restore all disturbed land along pipeline routes immediately after backfilling.	Inequitable water access if distribution is not planned with community input, potentially disadvantaging women, remote households, or low-income families; water-related conflict between villages or user groups if the shared source is over-allocated; risk of waterborne disease if the system is poorly maintained; OHS risks for workers installing pipelines in trenches (ESS2, ESS4, ESS10).	Identify existing water users and potentially affected upstream/downstream users; consult on allocation and access arrangements; establish transparent and equitable water-use rules; and provide an accessible grievance mechanism for water-use disputes.
63	SEHATI-EKO-S-006	Construction of Solar Power Plant Installation/Renewable Energy Lighting	Component 1	Land clearing and impermeable surface increase if ground-mounted panels are installed (rooftop preferred to avoid this); generation of hazardous battery waste at end-of-life, particularly lead-acid batteries; risk of electrical fire from improper wiring or faulty inverters; glare from panels if poorly oriented (ESS3).	Prioritize rooftop installations to avoid land clearing; where panels are ground-mounted, use already cleared land and keep grass cover under the panels; engage only certified solar installers complying with Indonesian electrical standards (PUIL); procure batteries and panels with a manufacturer take-back or disposal plan and document disposal; install lightning protection, appropriate fusing and grounding on all systems; provide a ventilated battery room with a fire extinguisher; orient panels to avoid glare towards houses and roads; conduct electrical safety inspection before commissioning.	Electrocution risk for untrained community members who tamper with the system; risk of inequitable benefit distribution if only certain households receive electricity access; social tension if the solar power system (PLTS) is managed by a single elite group; child safety risk near battery banks if not properly enclosed (ESS2, ESS4).	Establish a transparent and inclusive village energy committee for PLTS governance; ensure all battery installations are in locked, ventilated enclosures inaccessible to children; engage only certified electricians for installation and require safety handover training for the village operator; document and publicize the electricity allocation plan to ensure equitable access; train female community members as part of the operations and maintenance committee.

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64	SEHATI-EKO-S-007	Construction of Warehouse/Storage Facility for Products and Equipment	Component 1	Soil disturbance and compaction during construction of the warehouse foundation; altered surface drainage and potential waterlogging around the structure; dust from construction earthworks; potential contamination of stored agricultural products from pests or chemicals if ventilation and sanitation are inadequate; fire risk from stored combustible materials (ESS3).	Design foundation and site drainage to prevent waterlogging; apply the construction ESCOP (erosion, sediment and dust control); install pest-proof flooring, walls and ventilation in the warehouse; keep the warehouse clean and rotate stock (FIFO/FEFO); separate storage areas for chemicals/pesticides from food products; install fire extinguishers and develop a fire evacuation plan; prohibit smoking and open flames inside the facility.	Manual-handling injuries (musculoskeletal disorders) for workers loading and unloading heavy items; fire hazard for workers and nearby households; inequitable access to the storage facility if controlled by a single group; risk of theft or post-harvest loss if the facility is poorly secured (ESS2, ESS4).	Provide manual-handling training and mechanical lifting aids (trolleys, ramps) for warehouse workers; install smoke detectors and clearly mark fire exits; establish a transparent, multi-stakeholder warehouse management committee including women farmer representatives; implement access-control and inventory management procedures; include the facility in the village asset register and maintenance plan.
65	SEHATI-EKO-S-008	Procurement of Three-Wheel Transport Vehicle/Village Product Box Vehicle	Component 2	Exhaust emissions (CO, NOx, particulates) and noise from the vehicle engine contributing to local air and noise pollution; risk of fuel or oil spills during refueling or maintenance; inappropriate disposal of used lubricants and tires (ESS3).	Ensure vehicle meets national emission standards and undergoes regular scheduled maintenance, keep the muffler in working order, and keep vehicles more than three years old within the in-use emission standard (MoEF Regulation No. 8/2023); consider electric or low-emission models where available; use designated refueling areas with drip trays; transfer used oil to the supplier or a licensed B3 waste collector; return used tires to the supplier or a recycler, and do not burn them; document vehicle maintenance log; avoid idling engines in populated areas to reduce unnecessary emissions.	Road traffic accidents involving the vehicle, pedestrians, and other road users; OHS risk for the driver from prolonged vibration and road hazards; risk of vehicle capture by elite community members, excluding the intended beneficiaries; potential community conflict over vehicle scheduling and usage priority (ESS2, ESS4).	Require the driver to hold a valid license and complete defensive driving training; establish and publicize village-managed vehicle scheduling and usage rules; conduct regular vehicle safety checks; install road safety signage at locations the vehicle frequently uses; ensure the vehicle is available for use by women and other marginalized groups on equitable terms.
66	SEHATI-EKO-S-009	Construction of 3R Waste Management Facility/Waste Bank/Waste Management Unit	Component 1	Odor nuisance from decomposing organic waste if collection and processing is inadequate; leachate from waste storage contaminating soil and groundwater; risk of vector (flies, rats) breeding in accumulated waste; dust and particulate matter from waste sorting activities; potential contamination from improperly handled hazardous household waste (ESS3).	Line waste storage areas with impermeable material; install drainage, and leachate collection where organic waste is processed or held; implement an integrated pest management plan; separate organic waste for composting and prevent uncovered storage of rotting material; sort waste under a roof and keep the sorting area clean to limit dust; provide guidance to the community on segregation of hazardous waste (batteries, medicines) for separate handling, store it separately at the facility	Odor and sanitation complaints from neighboring households; OHS risks for waste bank workers (infections, cuts, dust inhalation), particularly informal sorters; social stigma associated with waste work if predominantly carried out by low-income groups; community conflict over facility siting (neighboring community opposition/NIMBY) (ESS2, ESS4).	Conduct community consultations, including with prospective neighbors of the facility, before site selection; establish a GRM with an accessible mechanism for odor/nuisance complaints; provide waste workers with full PPE (gloves, boots, dust masks, high-visibility vests), OHS training, and hepatitis B vaccination; design a fair and transparent waste bank revenue-sharing scheme; ensure women and youth

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					and hand it to a licensed B3 collector; for sites that process or hold organic waste, locate the facility at least 50 m from the nearest house and downwind of it; for waste banks holding only dry waste, keep at least 10 m from any well; keep all sites away from wells, rivers and flood-prone land; send residual waste to the district landfill (TPA); no open burning.		can participate as waste bank members and share in the economic benefits.
67	SEHATI-EKO-S-010	Procurement of Digital System for Production, Stock, and Transaction Recording	Component 2	Electronic waste (e-waste) from obsolete hardware requiring proper disposal; energy consumption from devices and network equipment (ESS3).	Procure energy-efficient devices (Energy Star or equivalent); establish an e-waste collection and disposal procedure aligned with Indonesian hazardous waste regulations (GR 22/2021); avoid disposing of batteries or electronics in ordinary village waste; include take-back arrangements for batteries and devices in procurement contracts.	Exclusion of community members with low literacy or no device access from digital benefits; data privacy risks if village data is improperly stored or shared; risk of digital systems primarily benefiting those already more advantaged (ESS4, ESS10).	Provide inclusive digital literacy training for women, the elderly, and youth; develop offline backup procedures for critical functions; apply data protection and privacy safeguards in accordance with the ITE Law and World Bank requirements; ensure all community members can access system outputs in plain language (printed summaries where needed).
Food Security							
68	SEHATI-KTP-C-001	Construction of Village Tertiary/Simple Irrigation System	Component 1	Soil disturbance, erosion and sedimentation during channel construction; changes to natural flow and reduced water for downstream users and aquatic habitats; waterlogging and soil salinization in poorly drained plots; increased agrochemical runoff from irrigated fields (ESS3, ESS6).	Assess water availability and existing uses, obtain water-use approval where required (E&S Screening Form item 1.3), agree water-sharing rules and maintain downstream flows; apply the construction ESCOP (erosion and sediment control) and stabilize channel banks; provide drainage to prevent waterlogging; line channels where seepage is high; promote integrated pest management and use only pesticides registered with the Ministry of Agriculture and not in WHO Class Ia, Ib or II (SEHATI Exclusion List No. 8).	Explosion risk from grain dust if the storage facility also has ignition sources; OHS risk for workers from heavy lifting and dust inhalation; risk of elite capture of grain storage benefits if the lumbung is not governed inclusively; food security risk for vulnerable households if grain is resold externally rather than distributed locally (ESS2, ESS4).	Prohibit smoking, open flames and spark-generating equipment in the grain storage area; provide dust masks and back-support belts for workers handling grain; establish an inclusive village grain storage committee with documented membership rules including women farmers; implement a grain allocation policy prioritizing food-insecure households before commercial sale; conduct GRM for community members excluded from grain access.

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69	SEHATI-KTP-C-002	Construction of Village Water Reservoir/Agricultural Long Storage	Component 1	Land clearing and excavation causing erosion and sedimentation; reduced downstream flow if a natural stream is impounded; embankment failure; stagnant water creating mosquito breeding sites; habitat loss if sited on natural wetland (ESS3, ESS6).	Site the reservoir on already cleared land, not on natural wetlands or peat (SEHATI Exclusion List No. 15), and avoid impounding natural streams where possible; maintain downstream flows; have embankments and spillways designed and supervised by a qualified engineer, and inspect and maintain them regularly, with no dams above 15 m (SEHATI Exclusion List No. 14); apply the construction ESCOP and revegetate embankments; manage edges and weeds to prevent mosquito breeding.	Pesticide exposure risk for farm workers, especially women who do most weeding and harvesting; risk of pesticide residue on produce reaching consumers; child exposure risk if pesticides are stored at home; risk of demonstration plot benefits not reaching smallholder farmers if managed by NGOs or government extension alone (ESS2, ESS4).	Conduct pesticide safety training for all farmers including women; provide appropriate PPE (gloves, mask, apron) for pesticide application; store pesticides in a locked, labeled cabinet away from food and out of children's reach; implement residue testing before marketing produce; establish a farmer field school model that actively includes women as lead farmers and knowledge transmitters.
70	SEHATI-KTP-C-003	Procurement of Pump and Agricultural Water Distribution Network	Component 2	Water extraction for irrigation potentially depleting surface water or groundwater available to other users; risk of water-logging and soil salinization in poorly drained irrigated plots; sedimentation from irrigation channels; energy use from pump irrigation (ESS3, ESS6).	Conduct water availability assessment before designing irrigation scheme, including dry-season availability and existing users, and obtain water-use approval where required; avoid large-scale groundwater extraction (E&S Screening Form item 1.3); where surface water is used, maintain downstream flow; install water-efficient technologies (drip or micro-spray irrigation) to minimize extraction; choose energy-efficient pumps and consider solar-powered pumps; design drainage channels to prevent waterlogging and salt build-up; stabilize channel banks and remove sediment from channels regularly; manage irrigation schedules to avoid peak-demand conflicts with other users; monitor water levels in nearby community wells, especially during the dry season.	Conflict between upstream and downstream water users; risk of irrigation infrastructure being captured by larger farmers to the exclusion of smallholders; OHS risk for workers constructing irrigation channels; risk of waterborne disease if irrigation water is contaminated (ESS2, ESS4, ESS10).	Establish an inclusive Water Users Association (WUA) with smallholder farmers and women as members; design irrigation system with equitable water allocation rules documented and agreed by all users; apply LMP for channel construction workers; conduct water quality testing for irrigation water and share results with all users; use GRM to resolve water-use disputes.
71	SEHATI-KTP-C-004	Construction of Farm Road/Food Production Road	Component 1	Soil erosion and sedimentation from earthworks and grading; loss of roadside vegetation; changes to surface drainage; dust and noise during construction; new access into natural forest or other natural habitat encouraging clearing (ESS3, ESS6).	Follow existing tracks and avoid natural forest, wetlands and steep, unstable slopes, with no new road access into natural forest or conservation areas (SEHATI Exclusion List No. 4 and No. 15;	Heat stress risk for workers inside greenhouses, especially in tropical climates; risk of pesticide over-application in enclosed environments causing worker exposure; inequitable	Enforce maximum working temperature limits and mandatory rest breaks for greenhouse workers; ensure greenhouse workers wear appropriate PPE when applying pesticides; prioritize women and smallholder farmers as primary

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					Biodiversity Exclusion List X13, ESMF Annex V); apply the construction ESCOP (side and cross drains, slope protection, dust and noise control); revegetate cut and fill slopes; buy sand, gravel and stone from established local building material suppliers and keep the receipts, and do not take them directly from rivers, beaches or unlicensed pits (SEHATI Exclusion List No. 17); agree a village maintenance plan for drains.	access to greenhouse technology if only wealthier farmers benefit (ESS2, ESS4).	beneficiaries of greenhouse technology; establish a cooperative model for shared greenhouse management with transparent allocation of growing space.
72	SEHATI-KTP-C-005	Construction of Drying Floor and Drying House	Component 1	Dust and chaff from drying and handling grain; smoke from fuel- or biomass-fired dryers in drying houses; runoff from drying floors carrying grain residues; soil disturbance during construction (ESS3).	Site drying floors away from houses and cover or screen them to reduce dust; prioritize solar dryer domes; where fuel- or biomass-fired dryers are used, keep them efficient, well maintained and fitted with chimneys; provide drainage around drying floors; reuse chaff and husks as compost, feed or fuel, with no open burning; apply the construction ESCOP.	Pesticide poisoning risk for farmers, especially women who apply herbicides and pesticides; chemical exposure for children in households storing pesticides at home; water access conflict between paddy irrigation and domestic water needs (ESS2, ESS4).	Conduct regular IPM training for all paddy farmers including women; strictly store and handle pesticides per label instructions and provide PPE; establish safe pesticide storage facility away from households and inaccessible to children; resolve water allocation conflicts through inclusive water-user consultation; apply GRM for community members affected by agricultural water use.
73	SEHATI-KTP-C-006	Procurement of Rice/Maize/Horticulture Dryer	Component 2	Smoke and particulate emissions from fuel- or biomass-fired dryers; dust and chaff from drying grain; fuel and oil spills and used oil from engine-driven dryers; energy consumption; noise from fans and burners (ESS3).	Prioritize solar dryer domes; where fuel- or biomass-fired dryers are used, keep them efficient, well maintained and fitted with chimneys, using husks or other dry residues as fuel, with no open burning; enclose or ventilate drying areas; refuel on impermeable surfaces and transfer used oil to the supplier or a licensed B3 waste collector; engines and generators meet the engine emission standard (MoEF Regulation No. 11/2021); choose right-sized, energy-efficient dryers and operate them away from houses.	Physical injury from hand tools used in garden maintenance; risk of garden benefits accruing only to the implementing household or school, excluding the wider community; risk of garden area encroaching on communal land (ESS2, ESS4).	Train garden workers in safe tool handling and provide appropriate PPE; design garden program with community sharing component (e.g., school garden that supplements school meals and distributes surplus to needy families); verify land tenure before construction; include women and youth as primary participants and beneficiaries.
74	SEHATI-KTP-C-007	Construction of Village Food Warehouse/Village Grain Barn	Component 1	Risk of contamination of grain storage from pesticide residue if grain is stored with chemical inputs; generation of grain dust during loading and handling, which is explosive at high concentrations; risk of grain mold and aflatoxin development in	Design lumbung with adequate ventilation, rodent-proof construction and moisture-proof flooring; segregate any pesticide or agro-chemical storage from grain stores; minimize dust during loading and handling and prohibit	OHS risks including machinery hazards, heat, dust and noise for processing workers; risk of elite capture of processing center if governance is not established inclusively; food safety risk	Install machine guards and emergency stop mechanisms; provide PPE and health surveillance for processing workers; establish an inclusive village cooperative to govern the center with women's leadership; implement product quality

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				poorly managed storage; rodents and pests attracted to stored grain; soil disturbance during lumbung pangan construction (ESS3).	smoking and open flames in the lumbung; implement first-in-first-out (FIFO) grain rotation and check stored grain regularly for mold, with aflatoxin testing where mold is found; apply integrated pest management; apply the construction ESCOP.	to consumers if hygienic standards are not maintained (ESS2, ESS4).	testing and maintain production records; post food safety standards visibly and conduct annual inspections.
75	SEHATI-KTP-C-008	Procurement of Village-Scale Rice Milling Unit	Component 2	Dust and husk particles from milling; noise and vibration from the mill and engine; husk and bran that may be burned openly; fuel and oil spills and used oil from diesel-powered mills; energy consumption (ESS3).	Enclose the milling area or fit dust collectors, and provide ventilation; place the mill on vibration mounts away from houses and operate it during daytime; reuse husk and bran as animal feed, compost, biochar or fuel in efficient dryers fitted with chimneys, with no open burning; refuel on impermeable surfaces and transfer used oil to the supplier or a licensed B3 waste collector; engines and generators meet the engine emission standard (MoEF Regulation No. 11/2021); choose right-sized, energy-efficient mills.	Physical injury and ergonomic strain from garden work, especially for women who perform most work; heat stress during outdoor work in tropical climate; exclusion of landless families from garden benefits if the activity is tied to land ownership (ESS2, ESS4).	Provide shade structures and water access at garden worksites; promote communal gardening models that allow landless families to participate; conduct gender analysis to ensure women's labor is recognized and rewarded equitably; apply LMP for any paid garden workers.
76	SEHATI-KTP-C-009	Procurement of Corn Sheller and Maize Sorting Equipment	Component 2	Dust from shelling and sorting; noise from machines and engines; cobs, husks and broken grain that may be burned openly; fuel and oil spills and used oil from engine-driven machines (ESS3).	Operate machines in ventilated areas away from houses and during daytime; maintain equipment regularly; reuse cobs and husks as animal feed, compost or fuel in efficient dryers fitted with chimneys, with no open burning; refuel on impermeable surfaces and transfer used oil to the supplier or a licensed B3 waste collector; engines and generators meet the engine emission standard (MoEF Regulation No. 11/2021).	Risk of land tenure dispute if perennial crops are planted on communally owned land; exclusion of women from perennial crop benefits if trees are legally registered only in male household head's name; market risk if demand for the crop collapses after a 3–5 year establishment period (ESS2, ESS4, ESS5).	Conduct land tenure verification before planting; register perennial crop rights jointly in the names of both spouses or all contributing household members; include perennial crop farmers in market-access programs and cooperative marketing; apply LMP for seasonal planting and harvesting workers; assess crop market viability before scaling up.
77	SEHATI-KTP-C-010	Construction of Silo/Grain Storage Facility	Component 1	Risk of contamination of stored grain from fumigant or pesticide residue if fumigants are misused or grain is stored with chemical inputs; generation of grain dust during loading and unloading, which is explosive at high concentrations; risk of grain mold and aflatoxin development in poorly managed storage; rodents and pests attracted to	Design the silo with adequate ventilation, moisture control and rodent-proof construction, and dry grain before storage; segregate any pesticide or agro-chemical storage from grain stores; use only registered fumigants, applied by trained and licensed applicators; minimize	Risk of elite capture of improved seed varieties if seed bank is not governed inclusively; risk that women — who traditionally manage seed in many Indonesian cultures — lose authority over seed selection if seed bank is technocratically managed; post-disaster	Establish a community seed committee with mandatory women's representation as equal or majority members; document seed access rules ensuring all village households can access seed on equitable terms; create a duplicate seed backup at a higher-level (district) institution; recognize and protect women's traditional seed knowledge as part of

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				stored grain; soil disturbance during silo construction (ESS3).	dust during loading and unloading and prohibit smoking and open flames near the silo; implement first-in-first-out (FIFO) grain rotation and check stored grain regularly for mold, with aflatoxin testing where mold is found; apply integrated pest management; apply the construction ESCOP.	seed scarcity risk if the bank lacks backup storage (ESS2, ESS4, ESS7).	project design; conduct GRM for seed access complaints.
78	SEHATI-KTP-C-011	Construction of Horticultural Greenhouse/Screen House	Component 1	Plastic pollution from greenhouse covering material (polyethylene film) and insect screens at end-of-life; soil fertility decline and chemical build-up in soil under continuous protected cultivation; pesticide and fertilizer runoff to nearby soil and water; energy use for ventilation or supplemental lighting (ESS3).	Plan for responsible collection and disposal or recycling of plastic film and screens at end-of-life, with no open burning; implement crop rotation under greenhouse to prevent soil fertility decline and chemical build-up; use biological soil amendments (compost, biofertilizers) to maintain soil health; apply integrated pest management and use only pesticides registered with the Ministry of Agriculture and not in WHO Class Ia, Ib or II (SEHATI Exclusion List No. 8), and collect empty containers for proper disposal; design greenhouse for natural ventilation to minimize energy use; check soil condition under the greenhouse annually, with support from the agricultural extension officer.	Odor nuisance for nearby residents; OHS risk for compost workers from pathogen exposure and heavy lifting; risk that compost benefits only reach wealthier farmers with access to transport for bulk organic amendment (ESS2, ESS4).	Site composting facility with community consultation on location; provide compost workers with PPE (gloves, boots, dust mask); establish equitable compost distribution system prioritizing smallholder and women farmers; integrate compost facility management into village sanitation governance; install GRM for odor complaints.
79	SEHATI-KTP-C-012	Construction of Village Seedling House/Nursery	Component 1	Plastic waste from polybags, trays and shading nets; pesticide and fertilizer use in seedling production; introduction or spread of invasive or non-native plant species; water use (ESS3, ESS6).	Reuse trays, use biodegradable pots where feasible and collect used polybags for recycling, with no open burning; apply integrated pest management and use only pesticides registered with the Ministry of Agriculture and not in WHO Class Ia, Ib or II (SEHATI Exclusion List No. 8); produce native or locally established species, and introduce new species only with written confirmation from the agriculture office that they are not invasive; use water-efficient irrigation.	Electrical hazard from water-proximate electrical equipment; risk that high-technology system is beyond the technical and financial capacity of village operators, causing rapid abandonment after project handover; risk of excluding traditional soil-based farmers from benefits (ESS2, ESS4).	Implement electrical safety standards including GFCI (Ground Fault Circuit Interrupter) protection for all water-proximate electrical equipment; conduct thorough operator training and establish ongoing technical support mechanism before handover; assess village technical capacity before selecting system complexity; design simplified, low-technology version first and upgrade based on operational success; include traditional farmers in the governance of the facility.

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80	SEHATI-KTP-C-013	Procurement of Horticultural Cold Storage	Component 2	Refrigerant leakage (ozone-depleting HCFCs, or HFCs with high global warming potential); energy consumption from cooling equipment; spoiled produce and packaging waste; wash water from produce handling; noise from compressors (ESS3).	Use non-ODS, low-GWP refrigerants and have units serviced by trained technicians; inspect for leaks and keep a refrigerant log; choose right-sized, energy-efficient, well-insulated units and consider solar backup; compost spoiled produce and send packaging to TPS3R; treat wash water through settling before discharge; site compressors away from houses.	OHS risk from manual handling of heavy produce, machinery hazards and wet floors; inequitable access to the facility if it is built for one buyer or large farmer and excludes smallholders; market power imbalance if a single trader controls the facility and prices (ESS2, ESS4).	Install mechanical handling aids (conveyor belts, trolleys) and provide manual-handling training; establish the facility as a village-owned cooperative asset accessible to all smallholder farmers on equal terms; develop transparent pricing and fee schedule; ensure women farmers have equal access to the facility; apply LMP for all facility workers.
81	SEHATI-KTP-S-001	Construction of Village Road/Production Road/Farm Access Road/Productive Access Route	Component 1	Soil erosion and sedimentation from earthworks and grading; loss of roadside vegetation; surface runoff changes and drainage disruption; dust generation affecting local air quality; noise and vibration from construction machinery; potential contamination from machinery fuel/oil spills; new access into natural forest or another natural habitat (ESS3, ESS6).	Apply the construction ESCOP and the ESCOP for village roads; follow existing tracks where possible, with no new road access into natural forest or conservation areas (SEHATI Exclusion List No. 4 and No. 15; Biodiversity Exclusion List X13, ESMF Annex V); install silt fences or sediment traps where runoff can reach streams or drains; replant or restore disturbed vegetation with native species; apply water-spray dust suppression on unpaved surfaces; schedule heavy machinery use during daylight hours only and keep noise and vibration at nearby houses within the limits in ESCOP 1; provide drip trays under parked machinery to prevent fuel/oil spills; design drainage (side and cross drains) to match natural catchment flows, and install culverts where the road crosses irrigation channels so water still reaches the fields; buy sand, gravel and stone from established local building material suppliers, and do not take them directly from rivers, beaches or unlicensed pits (SEHATI Exclusion List No. 17); where fill is taken from a village borrow area agreed with the community, leave it safe and stable and backfill the pits.	Temporary disruption of community access and movement during construction; noise and dust causing nuisance to nearby households; risk of road accidents involving construction vehicles and community members, especially children; potential exclusion of marginalized groups from road-use benefits; labor influx concerns if workers recruited from outside; risk of inadequately managed OHS causing worker injury (ESS2, ESS4).	Conduct inclusive community consultations before construction and agree on temporary access routes; establish and publicize a Grievance Redress Mechanism (GRM) accessible to all; implement traffic management plan with signage, speed limits and flag-persons near active worksites; apply a Labor Management Procedure (LMP) including OHS requirements, codes of conduct and prohibition of child/forced labor; ensure equitable access to road benefits for women, elderly and disabled persons.

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82	SEHATI-KTP-S-002	Construction of Village Bridge/Production Bridge/Economic Access Bridge	Component 1	Disturbance of riverbank stability and riparian vegetation during abutment construction; in-stream sedimentation and turbidity from excavation in or near watercourses; disruption of aquatic habitat and fish passage; risk of bank erosion at bridge ends if waterway geometry is altered; potential hydrocarbon pollution from in-stream machinery operation (ESS3, ESS6).	Apply the construction ESCOP; keep clearing of riverbank vegetation to a minimum and replant with native species; carry out in-stream work during low-flow periods and avoid fish spawning seasons where known; install silt screens, and cofferdams where needed, to isolate work areas from the watercourse; use manual or low-impact methods for in-stream work where possible; refuel machinery away from the river on a hard surface with drip trays and keep a spill kit on site; stabilize riverbanks with bioengineering (live-staking, coir rolls) after construction; design bridge span to pass flood flows without significantly altering stream geometry; remove all construction debris and temporary structures from the waterway before completion.	Temporary loss of community crossing access with safety risk for pedestrians and livestock; drowning hazard for workers working in or near watercourses; potential conflict if bridge limits water use or navigation by other community members; health risk from increased water turbidity affecting downstream drinking water sources (ESS2, ESS4).	Provide safe temporary crossing (log bridge or ferry) during construction; ensure all in-water workers wear life jackets and are supervised by a safety officer; consult with downstream communities on water-source protection measures; inform and engage fishing communities regarding construction timing to reduce livelihood disruption; include bridge safety railings and adequate width for all users including motorbikes and pedestrians with disabilities.
83	SEHATI-KTP-S-003	Construction of Culvert/Box Culvert/Productive Access Drainage	Component 1	Disruption of natural surface drainage patterns if culvert sizing is inadequate, causing upstream waterlogging or downstream flash flooding; erosion at culvert outfalls from concentrated flow; excavation-induced soil disturbance and sedimentation (ESS3).	Apply the construction ESCOP; size culverts in the DED to carry flood flows, and never smaller than the existing channel; install energy dissipators (riprap aprons) at culvert outlets to reduce erosion; carry out works in the dry season or at low flow and use sediment traps; compact and stabilize disturbed soil immediately after installation; ensure culvert invert is set at the same level as the natural channel bed to maintain aquatic connectivity; keep culvert inlets and outlets clear of debris, especially after heavy rain.	Short-term access disruption during trench excavation; open trenches creating fall or injury hazard for community members; potential property inundation if drainage is inadequately designed (ESS4).	Erect physical barriers and warning signs around all open trenches; backfill and compact trenches promptly after culvert installation; consult with community members likely to be affected by drainage changes before design is finalized; document and compensate any household property affected by temporary construction works.
84	SEHATI-KTP-S-004	Construction of Boat Mooring/Multi-purpose Small Jetty	Component 1	Disturbance of seabed or riverbed sediment and aquatic habitat during pile driving or mooring installation; risk of mangrove or seagrass damage if structure is sited in sensitive coastal areas; potential oil/fuel spills from watercraft using the facility;	Site mooring facility away from mangroves, seagrasses and coral reefs, and not inside or within 1 km of a conservation area or marine conservation area (SEHATI Exclusion List No. 4); obtain KKPRL or other required approvals for	Conflict with existing water users (fishers, traditional boat owners) over access to the mooring area; drowning risk during construction and operation; restricted access for women and elderly to waterfront livelihood activities if	Conduct multi-stakeholder consultations including women and fishing communities before siting and design; provide life-saving equipment (lifebuoys, life jackets) at the facility; design facility with non-slip surfaces, handrails and safe boarding

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				floating debris and litter accumulation around the mooring area (ESS3, ESS6).	coastal or river structures; use pre-fabricated components to minimize in-water disturbance; work at low tide and in the calm season, avoiding fish spawning periods where known, and use silt curtains where feasible; do not take coral, sand or mangroves for construction; keep a spill kit and a simple spill response procedure at the jetty; install waste collection bins and clear floating debris regularly; enforce fuel handling procedures to prevent spills.	facility design is not inclusive; risk of injury from boat-jetty collisions (ESS2, ESS4, ESS7).	access for all users; establish clear user rules and safety protocols posted at the facility; engage indigenous or customary fishing communities if they use the area (per ESS7).
85	SEHATI-KTP-S-005	Construction of Clean Water Facility/Productive Water Network	Component 1	Risk of groundwater over-abstraction and depletion of water table affecting other users; contamination of water source from improper pipeline installation or inadequate source protection zone; land disturbance and erosion during pipeline and reservoir construction; potential changes to downstream flow regime if surface water source is used (ESS3, ESS6).	Assess the water source before design, including dry-season yield and existing users, and obtain water-use approval where required; avoid large-scale groundwater extraction (E&S Screening Form item 1.3); where surface water is used, maintain downstream flow and agree water sharing with other users; establish a protection zone around the source and prohibit contaminating activities within it; install sanitary seals on wells and inspect pipelines for leakage before commissioning; test water quality before use against the clean water standard (MoH Regulation No. 2/2023) and periodically after that; apply the construction ESCOP and restore all disturbed land along pipeline routes immediately after backfilling.	Inequitable access to water if distribution is not planned with community input, potentially disadvantaging women, remote households or low-income families; water-related conflict between villages or user groups if the shared source is over-allocated; risk of waterborne disease if the system is poorly maintained; OHS risks for workers installing pipelines in trenches (ESS2, ESS4, ESS10).	Identify existing water users and potentially affected upstream/downstream users; consult on allocation and access arrangements; establish transparent and equitable water-use rules; and provide an accessible grievance mechanism for water-use disputes.
86	SEHATI-KTP-S-006	Construction of Solar Power Plant Installation/Renewable Energy Lighting	Component 1	Land clearing and impermeable surface increase if ground-mounted panels are installed (rooftop preferred to avoid this); generation of hazardous battery waste at end-of-life, particularly lead-acid batteries; risk of electrical fire from improper wiring or faulty inverters; glare from panels if poorly oriented (ESS3).	Prioritize rooftop installations to avoid land clearing; where panels are ground-mounted, use already cleared land and keep grass cover under the panels; engage only certified solar installers complying with Indonesian electrical standards (PUIL); procure batteries and panels with a manufacturer take-back or disposal plan and document disposal;	Electrocution risk for untrained community members interfering with the system; risk of inequitable benefit distribution if only certain households receive electricity access; social tension if PLTS is managed by a single elite group; child safety risk near battery banks if not properly enclosed (ESS2, ESS4).	Establish a transparent and inclusive village energy committee for governance of the PLTS; ensure all battery installations are in locked, ventilated enclosures inaccessible to children; engage only certified electricians for installation and require safety handover training for the village operator; document and publicize the electricity

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					install lightning protection, appropriate fusing and grounding on all systems; provide a ventilated battery room with a fire extinguishers; orient panels to avoid glare towards houses and roads; conduct electrical safety inspection before commissioning.		allocation plan to ensure equitable access; train female community members as part of the O&M committee.
87	SEHATI-KTP-S-007	Construction of Warehouse/Storage Facility for Products and Equipment	Component 1	Soil disturbance and compaction during construction of the warehouse foundation; altered surface drainage and potential waterlogging around the structure; dust from construction earthworks; potential contamination of stored agricultural products from pests or chemicals if ventilation and sanitation are inadequate; fire risk from stored combustible materials (ESS3).	Design foundation and site drainage to prevent waterlogging; apply the construction ESCOP (erosion, sediment and dust control); install pest-proof flooring, walls and ventilation in the warehouse; keep the warehouse clean and rotate stock (FIFO/FEFO); separate storage areas for chemicals/pesticides from food products; install fire extinguishers and develop a fire evacuation plan; prohibit smoking and open flames inside the facility.	Manual handling injuries (musculoskeletal disorders) for workers loading and unloading heavy items; fire hazard for workers and nearby households; inequitable access to storage if facility is controlled by a single group; theft or post-harvest loss risk if facility is poorly secured (ESS2, ESS4).	Provide manual-handling training and mechanical lifting aids (trolleys, ramps) for warehouse workers; install smoke detectors and clearly mark fire exits; establish a transparent multi-stakeholder management committee for the warehouse including women farmer representatives; implement access control and inventory management procedures; include the facility in the village asset register and maintenance plan.
88	SEHATI-KTP-S-008	Procurement of Three-Wheel Transport Vehicle/Village Product Box Vehicle	Component 2	Exhaust emissions (CO, NOx, particulates) and noise from the vehicle engine contributing to local air and noise pollution; risk of fuel or oil spills during refueling or maintenance; inappropriate disposal of used lubricants and tires (ESS3).	Ensure vehicle meets national emission standards and undergoes regular scheduled maintenance, keep the muffler in working order, and keep vehicles more than three years old within the in-use emission standard (MoEF Regulation No. 8/2023); consider electric or low-emission models where available; use designated refueling areas with drip trays; transfer used oil to the supplier or a licensed B3 waste collector; return used tires to the supplier or a recycler, and do not burn them; document vehicle maintenance log; avoid idling engines in populated areas to reduce unnecessary emissions.	Road traffic accidents involving the vehicle, pedestrians and other road users; OHS risk for the vehicle operator from prolonged vibration and road hazards; risk of vehicle capture by elite community members to the exclusion of targeted beneficiaries; potential community conflict over vehicle scheduling and use priority (ESS2, ESS4).	Require drivers to hold valid license and undergo defensive driving training; establish and publicize a vehicle scheduling and usage policy managed by the village; conduct regular vehicle safety checks; include road safety signage in locations where the vehicle frequently operates; ensure the vehicle is available for use by women and other marginalized groups on equitable terms.
89	SEHATI-KTP-S-009	Construction of 3R Waste Management Facility/Waste Bank/Waste	Component 1	Odor nuisance from decomposing organic waste if collection and processing is inadequate; leachate from waste storage contaminating soil and groundwater; risk of vector (flies, rats) breeding in accumulated waste; dust and particulate matter from	Line waste storage areas with impermeable material; install drainage, and leachate collection where organic waste is processed or held; implement an integrated pest management plan; separate organic waste for composting	Odor and sanitation nuisance complaints from nearby households; OHS risks for waste bank workers (infections, cuts, inhalation of dust) especially informal sorters; social stigma attached to waste-work if	Conduct community consultation including potential neighbors before selecting the facility site; establish GRM with accessible mechanism for odor/nuisance complaints; provide waste workers with full PPE (gloves, boots, dust

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		Management Unit		waste sorting activities; potential contamination from improperly handled hazardous household waste (ESS3).	and prevent uncovered storage of rotting material; sort waste under a roof and keep the sorting area clean to limit dust; provide guidance to the community on segregation of hazardous waste (batteries, medicines) for separate handling, store it separately at the facility and hand it to a licensed B3 collector; for sites that process or hold organic waste, locate the facility at least 50 m from the nearest house and downwind of it; for waste banks holding only dry waste, keep at least 10 m from any well; keep all sites away from wells, rivers and flood-prone land; send residual waste to the district landfill (TPA); no open burning.	mostly done by low-income groups; community conflict over siting of the facility (NIMBY opposition) (ESS2, ESS4).	masks, high-visibility vest), OHS training and hepatitis B vaccination; design a fair and transparent waste bank revenue-sharing scheme; ensure women and youth can participate as waste bank members and share economic benefits.
90	SEHATI-KTP-S-010	Procurement of Digital System for Production, Stock, and Transaction Recording	Component 2	Electronic waste (e-waste) from obsolete hardware requiring proper disposal; energy consumption from devices and network equipment (ESS3).	Procure energy-efficient devices (Energy Star or equivalent); establish an e-waste collection and disposal procedure aligned with Indonesian hazardous waste regulations (GR 22/2021); avoid disposing of batteries or electronics in ordinary village waste; include take-back arrangements for batteries and devices in procurement contracts.	Digital exclusion of community members with low literacy or no device access; data privacy risks if village data is improperly stored or shared; risk that digital systems primarily benefit those already advantaged (ESS4, ESS10).	Provide digital literacy training inclusive of women, elderly and youth; design offline backup procedures for critical functions; apply data protection and privacy safeguards aligned with the ITE Law and World Bank requirements; ensure all community members can access the system's outputs in plain language (printed summaries where needed).
Livestock							
91	SEHATI-PTR-C-001	Construction of Communal Ruminant Livestock Pen	Component 1	Animal manure and urine generating high-strength effluent with ammonia, BOD and pathogens if not managed; odor and vector (fly, rat) nuisance from livestock housing; greenhouse gas emissions (methane from cattle enteric fermentation, N2O from manure); risk of soil and water contamination from runoff from livestock yards (ESS3).	Design and implement a Manure Management Plan including daily collection, covered manure storage on a hard surface, composting and land application to prevent runoff; where feasible, install a biodigester to convert manure to biogas; use impermeable floors sloping to a collection drain and separate clean rainwater with gutters; locate livestock housing at least 100 m downwind from residences and 50 m from water bodies; implement vector	Zoonotic disease risk (brucellosis, leptospirosis, anthrax) for livestock workers and community members near the facility; odor complaints from neighbors; OHS risk from handling large animals (kicks, bites, crushing injuries); risk of elite capture of livestock benefits if the activity supports only wealthier households (ESS2, ESS4).	Require livestock workers to undergo zoonotic disease awareness training and provide PPE (gloves, boots, overalls); conduct regular veterinary health screening of animals; establish OHS protocols for safe animal handling; ensure livestock program targets the poorest households through participatory targeting with community verification; establish and publish GRM for odor and nuisance complaints.

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					control (fly traps, regular cleaning); monitor water quality in nearby wells and streams as required by the ESMP (UKL-UPL/SPPL); any discharge from the pen meets MoE Regulation No. 5/2014 (as amended), Appendix XX.		
92	SEHATI-PTR-C-002	Construction of Village-Scale Layer/Broiler Chicken Pen	Component 1	Wastewater from cleaning poultry houses, dead birds and litter with high organic and pathogen load; ammonia, hydrogen sulfide and odor from poultry houses, and flies breeding in wet litter; risk of highly pathogenic avian influenza (HPAI/H5N1), including spread to wild birds, if biosecurity is inadequate; litter and manure nutrient runoff (ESS3, ESS6).	Locate pens at least 100 m from the nearest house and downwind of settlements, and at least 50 m from wells, rivers and other water bodies; implement strict biosecurity protocols (closed housing with bird netting, footbaths, visitor restrictions, quarantine for new birds); keep litter dry and manage it with regular removal and composting; install curtain sidewalls, and fans where needed, for ventilation to dilute ammonia; drain cleaning water through a settling tank or soak pit before discharge, with no untreated discharge to water bodies; bury dead birds in a designated pit with lime, away from water sources, or as directed by the veterinary officer; report any unusual bird mortality to the district veterinary authority immediately.	HPAI risk to community and wider public health if inadequate biosecurity allows virus to spread; OHS risk for poultry workers from ammonia exposure and zoonotic disease; odor and waste nuisance for neighboring households; risk of market price collapse wiping out smallholder poultry investment (ESS2, ESS4).	Mandate HPAI biosecurity training for all poultry workers; provide PPE including respiratory protection, goggles and full-body coveralls for workers in poultry houses; conduct regular animal health inspections and report disease to veterinary authorities; include community notification protocol if HPAI is suspected; support cooperative marketing to improve price stability for smallholder poultry farmers.
93	SEHATI-PTR-C-003	Procurement of Mini Feed Mill/Livestock Feed Processing Equipment	Component 2	Dust from grinding and mixing feed ingredients; noise and vibration from mills and pelletizers; odor and pests from stored ingredients; energy consumption and used oil from engine-driven mills (ESS3).	Enclose or ventilate grinding and mixing areas; store ingredients dry, covered and pest-proof; place machines on anti-vibration mounts away from houses and operate them during daytime; choose energy-efficient equipment; transfer used oil to the supplier or a licensed B3 waste collector; engines and generators meet the engine emission standard (MoEF Regulation No. 11/2021); where process wastewater is generated, meet MoE/BPLH Regulation No. 2/2026.	Feed mill: machinery, dust, noise, manual handling, fire, operator safety/access. Bite, kick and injury risk from handling goats and sheep; community conflict if free-roaming goats damage neighboring crops; zoonotic disease risk (brucellosis, Q fever); child injury risk from unsupervised contact with large animals (ESS2, ESS4).	Enforce enclosed or tethered management to prevent crop damage; provide OHS training in safe animal handling; conduct regular veterinary testing for zoonotic diseases; educate community members in disease prevention around livestock; establish GRM for crop damage complaints and compensation mechanism; keep animals in secure pens not accessible to young children.

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94	SEHATI-PTR-C-004	Construction of Livestock Feed and Raw Material Warehouse	Component 1	Soil disturbance, dust and runoff during construction; feed spoilage, mold and mycotoxins in damp or poorly ventilated storage; rodents and pest birds attracted to stored feed; contamination if feed is stored with veterinary chemicals or pesticides; fire risk from stored materials (ESS3).	Apply the construction ESCOP and design site drainage to prevent waterlogging; install pest-proof, moisture-proof flooring, walls and ventilation, and apply FIFO stock rotation; store veterinary chemicals and pesticides separately from feed; apply integrated pest management; install fire extinguishers and prohibit smoking and open flames.	Feed warehouse: manual handling, dust, pests, fire, worker safety, equitable access; Extreme OHS risk for slaughter workers (knife injuries, animal handling, slipping on wet floors, bloodborne pathogen exposure); community health risk from improper offal disposal; food safety risk if slaughter is conducted unhygienically; animal welfare concerns during slaughter (ESS2, ESS4).	Require all slaughter workers to use cut-resistant gloves, non-slip boots, face shields and waterproof aprons; provide hepatitis B vaccination for slaughter workers; design facility with non-slip flooring, adequate lighting and emergency washing stations; implement Indonesian halal slaughter standards and humane handling practices; conduct regular food safety inspections and display inspection certificate publicly.
95	SEHATI-PTR-C-005	Construction of Livestock Drinking Water Installation	Component 1	Groundwater or surface-water abstraction that may reduce water for other users and for aquatic habitats downstream; manure accumulation and soil compaction around watering points contaminating water sources; leakage and overflow creating muddy, stagnant areas; soil disturbance during pipeline installation (ESS3, ESS6).	Assess the water source before design, obtain water-use approval where required, and avoid large-scale groundwater extraction (E&S Screening Form item 1.3); where surface water is used, maintain downstream flow; site watering points away from wells, springs and streams and fence water sources from livestock; provide hardened, drained surfaces around troughs and remove manure regularly; inspect pipes and troughs for leaks; apply the construction ESCOP.	Competing water uses, water access, community safety, O&M (ESS2, ESS4).	Prioritization & Quotas: Establish a binding village regulation (Perdes) that explicitly prioritizes human consumption. Install automated float valves or timer-based pumps that restrict livestock water extraction during peak domestic usage hours (e.g., early morning and late afternoon). Cross-Contamination Prevention: Require users to prevent diseased animals from using the communal trough. Implement a Standard Operating Procedure (SOP) for weekly trough scrubbing and disinfection with livestock-safe chlorine/bleach to prevent the spread of waterborne pathogens (e.g., Leptospirosis) between different herds.
96	SEHATI-PTR-C-006	Procurement of Milk Cooling Unit/Milk Chiller	Component 2	Refrigerant leakage (ozone-depleting HCFCs, or HFCs with high global warming potential); energy consumption from cooling; spoiled milk from power outages or breakdowns; wastewater from cleaning the chiller tank with milk residues and detergents; noise from compressors (ESS3).	Use non-ODS, low-GWP refrigerants and have units serviced by trained technicians; inspect for leaks and keep a refrigerant log; choose energy-efficient units sized to the daily milk volume and consider solar backup; feed spoiled milk to animals or add it to a biogas digester, with no discharge to water bodies; drain tank cleaning water through a settling tank or soak pit before discharge; site compressors away from houses.	Milk chiller/cold storage: refrigeration/electrical safety, cold exposure, access and O&M; (ESS2, ESS4).	Grounding (Earthing) System: The chiller unit, agitator motor, and all stainless-steel surfaces must be deeply grounded to prevent fatal electrocution, which is a severe risk when washing equipment in wet boots. Thermal & Wet PPE: Provide operators with thick, insulated rubber gloves for handling freezing stainless steel components and heavy milk cans, along

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
							with liquid-proof aprons and anti-slip rubber boots for the wet processing floor. Inclusive Scheduling: Set milk collection hours that accommodate smallholder farmers, particularly women who often manage household dairy cows and face competing domestic schedules in the morning and evening.
97	SEHATI-PTR-C-007	Construction of Milk/Egg/Meat Processing Unit	Component 1	Wastewater from milk or meat processing with high BOD, fats and blood; heat and energy consumption from pasteurization and cooking; solid waste (eggshells, trimmings, packaging); odor and pests; soil disturbance during construction (ESS3).	Treat wastewater through screens, grease traps, a settling tank and biofilter before discharge, with no untreated discharge, meeting MoE Regulation No. 5/2014 (as amended), using the sector appendix that matches the product (ESCOP 3), and monitor effluent quality as required by the ESMP (UKL-UPL/SPPL); use energy-efficient pasteurization equipment; compost organic waste and eggshells and send packaging to TPS3R; install fly screens and pest control; apply the construction ESCOP.	Combined zoonotic disease risk from fish and poultry; OHS risk for workers in water-adjacent poultry systems; risk of income exclusion for non-land-owning community members from integrated pond-livestock systems (ESS2, ESS4).	Mandate biosafety protocols for integrated system workers; require vaccination of poultry in integrated systems; design community cooperative ownership model for integrated systems that includes landless members as labor shareholders; apply LMP for integrated system workers; establish water quality monitoring and share results with neighboring households.
98	SEHATI-PTR-C-008	Construction of Biodigester/Biogas System for Livestock Waste	Component 1	Biogas (methane) leaks causing fire or explosion risk and greenhouse gas emissions; digestate overflow contaminating soil and water; odor during manure loading; soil disturbance during construction (ESS3).	Use trained installers and follow the design for size and slurry input; check digesters, pipes and valves regularly for leaks (soap-water test) and repair immediately; keep smoking and open flames away, fence the digester and train users, including women who cook, on safe operation; use the biogas rather than releasing it; keep the manure inlet area clean; manage digestate in a covered pit or drying bed and use it as fertilizer, with no overflow to drains; locate the digester away from wells and water bodies; apply the construction ESCOP.	fire/explosion/gas hazards, confined spaces where applicable, operator/community safety, safe O&M; allergen risk (rabbit fur) for workers with respiratory sensitivity; risk of activity benefiting only a few households without broader community access (ESS2, ESS4).	Provide handling gloves and dust masks for workers; conduct regular health checks for workers with respiratory sensitivities; design program to reach the poorest households; apply LMP for any paid animal workers; include women as primary producers.

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
99	SEHATI-PTR-C-009	Construction of Livestock Waste Compost/ Organic Fertilizer Unit	Component 1	Odor, flies and leachate from manure composting; methane from poorly aerated piles; pathogen survival if composting temperature is not adequately managed; runoff from compost areas contaminating soil and water (ESS3).	Locate the unit at least 50 m from the nearest house, downwind and away from wells and water bodies; roof the composting area, use impermeable floors and collect leachate; turn piles regularly and check that they heat up enough to kill pathogens; do not compost carcasses or veterinary waste with manure; control flies with covered piles and fly traps; keep records of inputs and outputs.	biological exposure, manual handling, nuisance, worker safety (ESS2, ESS4).	Bio-Aerosol PPE: Require operational workers to wear N95/FFP2 respirators, heavy-duty liquid-proof gloves, and knee-high rubber boots when turning active compost or handling raw livestock manure to prevent inhalation of fungal spores and pathogens. Aerobic Odor Control: Odor (ammonia and hydrogen sulfide) spikes when compost piles lose oxygen. Enforce a strict turning schedule to maintain aerobic decomposition, which naturally eliminates foul odors.
100	SEHATI-PTR-C-010	Construction of Animal Quarantine Pen/Simple Biosecurity Facility	Component 1	Biological waste (used syringes, vaccine vials, carcasses) requiring safe disposal; chemical contamination of soil and water from disinfectants and veterinary drugs; risk of antimicrobial resistance (AMR) from antibiotic misuse; manure and wastewater from quarantined animals (ESS3).	Collect used syringes, needles and vials in a sealed container and hand them to Puskeswan or a licensed medical waste collector; do not open carcasses of animals that died suddenly, and bury carcasses in a designated pit with lime, covered by at least 1 m of soil and away from water sources, or as directed by the veterinary officer; report sudden deaths or suspected disease to Puskeswan immediately; store disinfectants securely and empty used footbath solution into a soak pit away from wells and streams; use veterinary medicines only as advised by a veterinarian or paravet, with no antibiotic growth promoters in feed (MoA Regulation No. 14/2017), and keep a veterinary drug register; collect manure from quarantined animals separately and compost it.	zoonoses, animal handling, worker/community exposure, biosecurity (ESS2, ESS4).	Perimeter Isolation: Site the facility downwind and at least 50–100 meters away from community housing, main roads, and healthy livestock populations. Enclose the perimeter with a secure, double-layer fence to prevent contact with stray dogs, wildlife, and unauthorized visitors. Mandatory Immunization: Require all quarantine workers to be vaccinated against relevant occupational zoonoses (such as Tetanus and Rabies, depending on the livestock species) coordinated with the local Puskesmas. Strict PPE Requirements: Supply and mandate the use of heavy-duty liquid-proof coveralls, rubber boots, nitrile gauntlet gloves, and N95/FFP2 respirators (crucial for aerosolized pathogens like Q Fever or Avian Influenza).

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
101	SEHATI-PTR-C-011	Procurement of Milking Equipment and Milk Sanitation Tools	Component 2	Wastewater from cleaning milking equipment with milk residues and detergents; soil and water contamination from sanitizing chemicals if overused or poorly stored; water and energy use for hot-water cleaning (ESS3).	Drain cleaning water through a settling tank or soak pit before discharge, with no direct discharge to water bodies; use biodegradable detergents and approved sanitizers at the recommended doses, stored in labeled containers away from feed and milk; use water- and energy-efficient cleaning practices.	machinery/electrical safety, ergonomic risks, hygiene, operator training; Worker OHS risk from hot processing equipment, cutting tools and heavy lifting; food safety risk to consumers from improperly processed dairy or meat products; risk of market access exclusion for small producers if processing cooperative favors larger members (ESS2, ESS4).	Provide heat-resistant PPE and install machine guards; implement GMP and food safety training for all processing workers; conduct regular product testing for pathogen content; establish transparent cooperative access rules ensuring smallholder farmers can deliver to the processing facility; apply LMP for all processing workers.
102	SEHATI-PTR-C-012	Procurement of Cold Storage/Freezer for Livestock Products	Component 2	Refrigerant leakage (ozone-depleting HCFCs, or HFCs with high global warming potential); energy consumption from freezing; spoiled products from power outages or breakdowns; wastewater from cleaning and thawing with blood and fat; noise from compressors (ESS3).	Use non-ODS, low-GWP refrigerants and have units serviced by trained technicians; inspect for leaks and keep a refrigerant log; choose energy-efficient, well-insulated units sized to the expected product volume and consider solar backup; bury spoiled products in a pit away from water sources or compost them in a covered area; drain cleaning and thaw water through a grease trap and settling tank before discharge; site compressors away from houses.	refrigeration/electrical safety, cold exposure, access and O&M (ESS2 & ESS4).	Thermal PPE: Supply certified cold-climate gear, thermal gloves, balaclavas, and anti-slip cold-rated boots. Transparent Fee Ledger: Post the daily or weekly rental rates per crate/carcass publicly and record all usage in a transparent, community-audited ledger.
103	SEHATI-PTR-C-013	Construction of Village-Scale Poultry Slaughterhouse	Component 1	Wastewater with very high BOD, COD, fat and blood; feathers, offal and blood requiring safe disposal; odor and flies from decomposing waste; contamination of soil and water from untreated discharge; packaging waste; energy and water consumption (ESS3).	Collect blood separately; treat wastewater through screens, grease traps, a settling tank and biofilter before discharge, with no untreated discharge, meeting MoE Regulation No. 5/2014 (as amended), Appendix XLV, and monitor effluent quality as required by the UKL-UPL/SPPL; use impermeable floors draining to the treatment unit; compost feathers, offal and blood in a covered area, or bury them in a pit away from water sources; locate the facility away from houses and water bodies; dry-clean floors before washing to reduce water use; send packaging waste to TPS3R or a waste bank; comply with Indonesian meat hygiene regulations.	worker injuries, hygiene/food safety, animal handling, community nuisance, worker conditions; OHS risk for slaughterhouse workers from machinery and repetitive motion; (ESS2, ESS4).	Emergency First Aid: Maintain fully stocked first-aid kits containing blood-clotting dressings, antiseptics, and eye-wash stations near the processing lines. Odor & Sound Buffering: Plant a green perimeter buffer of broad-leafed trees around the building and restrict slaughter activities to fixed early-morning hours to minimize noise and odor disturbances to nearby residents. Hygiene & Change Facilities: Provide dedicated, clean changing rooms, hot/cold showers, and separate toilets so workers do not carry contaminated workwear home.

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
104	SEHATI-PTR-S-001	Construction of Village Road/ Production Road/Farm Access Road/ Productive Access Route	Component 1	Soil erosion and sedimentation from earthworks and grading; loss of roadside vegetation; surface runoff changes and drainage disruption; dust generation affecting local air quality; noise and vibration from construction machinery; potential contamination from machinery fuel/oil spills; new access into natural forest or other natural habitat (ESS3, ESS6).	Apply the construction ESCOP and the ESCOP for village roads; follow existing tracks where possible, with no new road access into natural forest or conservation areas (SEHATI Exclusion List No. 4 and No. 15; Biodiversity Exclusion List X13, ESMF Annex V); install silt fences or sediment traps where runoff can reach streams or drains; replant or restore disturbed vegetation with native species; apply water-spray dust suppression on unpaved surfaces; schedule heavy machinery use during daylight hours only and keep noise and vibration at nearby houses within the limits in ESCOP 1; provide drip trays under parked machinery to prevent fuel/oil spills; design drainage (side and cross drains) to match natural catchment flows; buy sand, gravel and stone from established local building material suppliers and keep the receipts, and do not take them directly from rivers, beaches or unlicensed pits (SEHATI Exclusion List No. 17); where fill is taken from a village borrow area agreed with the community, leave it safe and stable and backfill the pits.	Temporary disruption of community access and movement during construction; noise and dust causing nuisance to nearby households; risk of road accidents involving construction vehicles and community members, especially children; potential exclusion of marginalized groups from road-use benefits; labor influx concerns if workers recruited from outside; risk of inadequately managed OHS causing worker injury (ESS2, ESS4).	Conduct inclusive community consultations before construction and agree on temporary access routes; establish and publicize a Grievance Redress Mechanism (GRM) accessible to all; implement traffic management plan with signage, speed limits and flag-persons near active worksites; apply a Labor Management Procedure (LMP) including OHS requirements, codes of conduct and prohibition of child/forced labor; ensure equitable access to road benefits for women, elderly and disabled persons.
105	SEHATI-PTR-S-002	Construction of Village Bridge/ Production Bridge/ Economic Access Bridge	Component 1	Disturbance of riverbank stability and riparian vegetation during abutment construction; in-stream sedimentation and turbidity from excavation in or near watercourses; disruption of aquatic habitat and fish passage; risk of bank erosion at bridge ends if waterway geometry is altered; potential hydrocarbon pollution from in-stream machinery operation (ESS3, ESS6).	Apply the construction ESCOP; keep clearing of riverbank vegetation to a minimum and replant with native species; carry out in-stream work during low-flow periods and avoid fish spawning seasons where known; install silt screens, and cofferdams where needed, to isolate work areas from the watercourse; use manual or low-impact methods for in-stream work where possible; refuel machinery away from the river on a hard surface with drip trays and keep a spill kit on site; stabilize riverbanks with bioengineering (live-staking, coir rolls)	Temporary loss of community crossing access with safety risk for pedestrians and livestock; drowning hazard for workers working in or near watercourses; potential conflict if bridge limits water use or navigation by other community members; health risk from increased water turbidity affecting downstream drinking water sources (ESS2, ESS4).	Provide safe temporary crossing (log bridge or ferry) during construction; ensure all in-water workers wear life jackets and are supervised by a safety officer; consult with downstream communities on water-source protection measures; inform and engage fishing communities regarding construction timing to reduce livelihood disruption; include bridge safety railings and adequate width for all users including motorbikes and pedestrians with disabilities.

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
					after construction; design bridge span to pass flood flows without significantly altering stream geometry; remove all construction debris and temporary structures from the waterway before completion.		
106	SEHATI-PTR-S-003	Construction of Culvert/Box Culvert/ Productive Access Drainage	Component 1	Disruption of natural surface drainage patterns if culvert sizing is inadequate, causing upstream waterlogging or downstream flash flooding; erosion at culvert outfalls from concentrated flow; excavation-induced soil disturbance and sedimentation (ESS3).	Apply the construction ESCOP; size culverts in the DED to carry flood flows, and never smaller than the existing channel; install energy dissipators (riprap aprons) at culvert outlets to reduce erosion; carry out works in the dry season or at low flow and use sediment traps; compact and stabilize disturbed soil immediately after installation; ensure culvert invert is set at the same level as the natural channel bed to maintain aquatic connectivity; keep culvert inlets and outlets clear of debris, especially after heavy rain.	Short-term access disruption during trench excavation; open trenches creating fall or injury hazard for community members; potential property inundation if drainage is inadequately designed (ESS4).	Erect physical barriers and warning signs around all open trenches; backfill and compact trenches promptly after culvert installation; consult with community members likely to be affected by drainage changes before design is finalized; document and compensate any household property affected by temporary construction works.
107	SEHATI-PTR-S-004	Construction of Boat Mooring/Multi-purpose Small Jetty	Component 1	Disturbance of seabed or riverbed sediment and aquatic habitat during pile driving or mooring installation; risk of mangrove or seagrass damage if structure is sited in sensitive coastal areas; potential oil/fuel spills from watercraft using the facility; floating debris and litter accumulation around the mooring area (ESS3, ESS6).	Site mooring facility away from mangroves, seagrasses and coral reefs, and not inside or within 1 km of a conservation area or marine conservation area (SEHATI Exclusion List No. 4); obtain KKPRL or other required approvals for coastal or river structures; use pre-fabricated components to minimize in-water disturbance; work at low tide and in the calm season, avoiding fish spawning periods where known, and use silt curtains where feasible; do not take coral, sand or mangroves for construction; keep a spill kit and a simple spill response procedure at the jetty; install waste collection bins and clear floating debris regularly; enforce fuel handling procedures to prevent spills.	Conflict with existing water users (fishers, traditional boat owners) over access to the mooring area; drowning risk during construction and operation; restricted access for women and elderly to waterfront livelihood activities if facility design is not inclusive; risk of injury from boat-jetty collisions (ESS2, ESS4, ESS7).	Conduct multi-stakeholder consultations including women and fishing communities before siting and design; provide life-saving equipment (lifebuoys, life jackets) at the facility; design facility with non-slip surfaces, handrails and safe boarding access for all users; establish clear user rules and safety protocols posted at the facility; engage indigenous or customary fishing communities if they use the area (per ESS7).

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
108	SEHATI-PTR-S-005	Construction of Clean Water Facility/Productive Water Network	Component 1	Risk of groundwater over-abstraction and depletion of water table affecting other users; contamination of water source from improper pipeline installation or inadequate source protection zone; land disturbance and erosion during pipeline and reservoir construction; potential changes to downstream flow regime if surface water source is used (ESS3, ESS6).	Assess the water source before design, including dry-season yield and existing users, and obtain water-use approval where required; avoid large-scale groundwater extraction (E&S Screening Form item 1.3); where surface water is used, maintain downstream flow and agree water sharing with other users; establish a protection zone around the source, fence it from livestock and prohibit contaminating activities within it; install sanitary seals on wells and inspect pipelines for leakage before commissioning; test water quality before use against the clean water standard (MoH Regulation No. 2/2023) and periodically after that; apply the construction ESCOP and restore all disturbed land along pipeline routes immediately after backfilling.	Inequitable access to water if distribution is not planned with community input, potentially disadvantaging women, remote households or low-income families; water-related conflict between villages or user groups if the shared source is over-allocated; risk of waterborne disease if the system is poorly maintained; OHS risks for workers installing pipelines in trenches (ESS2, ESS4, ESS10).	Identify existing water users and potentially affected upstream/downstream users; consult on allocation and access arrangements; establish transparent and equitable water-use rules; and provide an accessible grievance mechanism for water-use disputes.
109	SEHATI-PTR-S-006	Construction of Solar Power Plant Installation/Renewable Energy Lighting	Component 1	Land clearing and impermeable surface increase if ground-mounted panels are installed (rooftop preferred to avoid this); generation of hazardous battery waste at end-of-life, particularly lead-acid batteries; risk of electrical fire from improper wiring or faulty inverters; glare from panels if poorly oriented (ESS3).	Prioritize rooftop installations to avoid land clearing; where panels are ground-mounted, use already cleared land and keep grass cover under the panels; engage only certified solar installers complying with Indonesian electrical standards (PUIL); procure batteries and panels with a manufacturer take-back or disposal plan and document disposal; install lightning protection, appropriate fusing and grounding on all systems; provide a ventilated battery room with a fire extinguisher; orient panels to avoid glare towards houses and roads; conduct electrical safety inspection before commissioning.	Electrocution risk for untrained community members interfering with the system; risk of inequitable benefit distribution if only certain households receive electricity access; social tension if PLTS is managed by a single elite group; child safety risk near battery banks if not properly enclosed (ESS2, ESS4).	Establish a transparent and inclusive village energy committee for governance of the PLTS; ensure all battery installations are in locked, ventilated enclosures inaccessible to children; engage only certified electricians for installation and require safety handover training for the village operator; document and publicize the electricity allocation plan to ensure equitable access; train female community members as part of the O&M committee.

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
110	SEHATI-PTR-S-007	Construction of Warehouse/Storage Facility for Products and Equipment	Component 1	Soil disturbance and compaction during construction of the warehouse foundation; altered surface drainage and potential waterlogging around the structure; dust from construction earthworks; potential contamination of stored agricultural products from pests or chemicals if ventilation and sanitation are inadequate; fire risk from stored combustible materials (ESS3).	Design foundation and site drainage to prevent waterlogging; apply the construction ESCOP (erosion, sediment and dust control); install pest-proof flooring, walls and ventilation in the warehouse; keep the warehouse clean and rotate stock (FIFO/FEFO); separate storage areas for chemicals/pesticides from food products; install fire extinguishers and develop a fire evacuation plan; prohibit smoking and open flames inside the facility.	Manual handling injuries (musculoskeletal disorders) for workers loading and unloading heavy items; fire hazard for workers and nearby households; inequitable access to storage if facility is controlled by a single group; theft or post-harvest loss risk if facility is poorly secured (ESS2, ESS4).	Provide manual-handling training and mechanical lifting aids (trolleys, ramps) for warehouse workers; install smoke detectors and clearly mark fire exits; establish a transparent multi-stakeholder management committee for the warehouse including women farmer representatives; implement access control and inventory management procedures; include the facility in the village asset register and maintenance plan.
111	SEHATI-PTR-S-008	Procurement of Three-Wheel Transport Vehicle/Village Product Box Vehicle	Component 2	Exhaust emissions (CO, NOx, particulates) and noise from the vehicle engine contributing to local air and noise pollution; risk of fuel or oil spills during refueling or maintenance; inappropriate disposal of used lubricants and tires (ESS3).	Ensure vehicle meets national emission standards and undergoes regular scheduled maintenance, keep the muffler in working order, and keep vehicles more than three years old within the in-use emission standard (MoEF Regulation No. 8/2023); consider electric or low-emission models where available; use designated refueling areas with drip trays; transfer used oil to the supplier or a licensed B3 waste collector; return used tires to the supplier or a recycler, and do not burn them; document vehicle maintenance log; avoid idling engines in populated areas to reduce unnecessary emissions.	Road traffic accidents involving the vehicle, pedestrians and other road users; OHS risk for the vehicle operator from prolonged vibration and road hazards; risk of vehicle capture by elite community members to the exclusion of targeted beneficiaries; potential community conflict over vehicle scheduling and use priority (ESS2, ESS4).	Require driver to hold valid license and undergo defensive driving training; establish and publicize a vehicle scheduling and usage policy managed by the village; conduct regular vehicle safety checks; include road safety signage in locations where the vehicle frequently operates; ensure the vehicle is available for use by women and other marginalized groups on equitable terms.
112	SEHATI-PTR-S-009	Construction of 3R Waste Management Facility/Waste Bank/Waste Management Unit	Component 1	Odor nuisance from decomposing organic waste if collection and processing is inadequate; leachate from waste storage contaminating soil and groundwater; risk of vector (flies, rats) breeding in accumulated waste; dust and particulate matter from waste sorting activities; potential contamination from improperly handled hazardous household waste (ESS3).	Line waste storage areas with impermeable material; install drainage, and leachate collection where organic waste is processed or held; implement an integrated pest management plan; separate organic waste for composting and prevent uncovered storage of rotting material; sort waste under a roof and keep the sorting area clean to limit dust; provide guidance to the community on segregation of hazardous waste (batteries, medicines) for separate handling, store it separately at the facility	Odor and sanitation nuisance complaints from nearby households; OHS risks for waste bank workers (infections, cuts, inhalation of dust) especially informal sorters; social stigma attached to waste-work if mostly done by low-income groups; community conflict over siting of the facility (NIMBY opposition) (ESS2, ESS4).	Conduct community consultation including potential neighbors before selecting the facility site; establish GRM with accessible mechanism for odor/nuisance complaints; provide waste workers with full PPE (gloves, boots, dust masks, high-visibility vest), OHS training and hepatitis B vaccination; design a fair and transparent waste bank revenue-sharing scheme; ensure women and youth can participate as waste bank members and share economic benefits.

No	SEHATI Code	Activity Name (LKPP Nomenclature)	Component	Environmental Risks	Environmental Mitigation Measures	Social Risks	Social Mitigation Measures
					and hand it to a licensed B3 collector; for sites that process or hold organic waste, locate the facility at least 50 m from the nearest house and downwind of it; for waste banks holding only dry waste, keep at least 10 m from any well; keep all sites away from wells, rivers and flood-prone land; send residual waste to the district landfill (TPA); no open burning.		
113	SEHATI-PTR-S-010	Procurement of Digital System for Production, Stock, and Transaction Recording	Component 2	Electronic waste (e-waste) from obsolete hardware requiring proper disposal; energy consumption from devices and network equipment (ESS3).	Procure energy-efficient devices (Energy Star or equivalent); establish an e-waste collection and disposal procedure aligned with Indonesian hazardous waste regulations (GR 22/2021); avoid disposing of batteries or electronics in ordinary village waste; include take-back arrangements for batteries and devices in procurement contracts.	Digital exclusion of community members with low literacy or no device access; data privacy risks if village data is improperly stored or shared; risk that digital systems primarily benefit those already advantaged (ESS4, ESS10).	Provide digital literacy training inclusive of women, elderly and youth; design offline backup procedures for critical functions; apply data protection and privacy safeguards aligned with the ITE Law and World Bank requirements; ensure all community members can access the system's outputs in plain language (printed summaries where needed).

5.3. Cumulative Impact Check

SEHATI will finance many small investments in up to The 6,085-entry longlist will be screened to target approx. 5,000 villages, chosen village by village through the Musyawarah Desa. Each is screened on its own and most are small. But several of them in the same landscape can together cause effects that no single screening shows: less water in the dry season, more pressure on a forest, mangrove or reef, more waste in the same river, or more visitors at the same site. This check looks at Project investments together, at the scale of the landscape they share, and sets conditions where their combined effect could be significant. It puts into practice the cumulative-risk considerations that ESCP Action 1.1 requires the ESMF to include. It covers three situations:

- **A. Shared water sources:** several irrigation or water schemes that draw on the same river, spring, aquifer or irrigation area (the cumulative water check);
- **B. Biodiversity-sensitive areas:** several activities that have a physical footprint, or that bring people in, around the same protected area, forest block, mangrove belt, peat hydrological unit, karst area, reef or lake;
- **C. Clusters of similar investments:** several facilities of the same type that discharge to the same river, lake or coast, draw on the same natural resource, or affect the same settlement.

Landscape units and clustering. The check is done for a landscape unit, not for a village. The unit is the area that the investments share: for water, the river basin or sub-basin (DAS or sub-DAS), irrigation area or groundwater basin (CAT); for biodiversity, the protected area or forest block and the villages around it, the mangrove belt or estuary, the peat hydrological unit (KHG), the karst area, or the reef, lake or bay; for clusters, the river reach, lake or stretch of coast that receives the discharges, or the forest, woodland, river bed or quarry that supplies fuelwood, timber, sand or stone. KRISNA records the GPS location, type and size of every proposed, approved and completed Project investment (Annex V, Section 15) and must be able to show them on a map with the layers of the Village Biodiversity Sensitivity Register (Annex V, Section 7) and the landscape units (ESCP Action 1.2). Before each round of district verification, the DCT uses this map to group the investments by landscape unit and see where any trigger below is met. Investments from earlier funding cycles count, and so do other large users or sources known in the same unit, such as other irrigation schemes, plantations, mines or industries.

Who carries out the check. The DCT carries out the check for landscape units within its district, with the relevant district offices (water resources (PU SDA), agriculture, fisheries, environment (DLH), forestry or tourism) and sends the result to the CPMU. The CPMU carries it out itself where the unit spans more than one district or contains a Flag C feature (Annex V, Table V-1), and engages a hydrologist, ecologist or other specialist where the data are insufficient or the combined effect may be significant. The check is completed before the activities concerned are approved.

A. Shared water sources (cumulative water check)

SEHATI finances many small irrigation canals, intakes, pumps, wells and reservoirs. Each is small, but several schemes drawing on the same river, spring or aquifer can together reduce dry-season flow, lower groundwater, cause conflict between upstream and downstream users, and harm wetlands and aquatic life. ESCOP 9 (Annex III) and the Biodiversity Screening Procedure (Annex V, Table V-4, 13.6) set the measures for each scheme; this check looks at the schemes together. The District Coordination Team (DCT) carries it out with the district water resources (PU SDA) and agriculture offices and refers schemes that share one source to the CPMU, in line with Annex V; the CPMU carries out the check itself where schemes in more than one district share a river basin.

When the check is required

- two or more Project-financed schemes (new or expanded canals, intakes, pumps, wells, boreholes or reservoirs) take water from the same river, stream, spring, aquifer or irrigation area (daerah irigasi), in the same or in different funding cycles;
- a scheme expands the area irrigated from a source that already supplies other irrigation, drinking water or fishponds;
- the source feeds a wetland, mangrove or peat area (such schemes are also Category C under Annex V); or
- people downstream have complained about water shortages, or wells have dropped or dried up.

How to carry out the check

1. **Define the area:** the catchment or irrigation area that the schemes draw from, down to the next main water user or sensitive feature downstream.
2. **List all water uses:** the Project schemes, existing and proposed, with the design abstraction rate stated for each under ESCOP 9; and other known users such as drinking-water systems, other irrigation and fishponds, using village data, water-user associations (P3A/GP3A) and district office records.
3. **Estimate the water available in the dry season:** use records from the river basin authority (BWS/BBWS) or the provincial or district PU SDA office where they exist; otherwise measure the dry-season flow with simple field methods and ask long-time users about the lowest flows in recent dry years. For groundwater, record well depths and water levels and any reports of wells drying up.
4. **Compare:** add up the dry-season abstraction of all schemes and compare it with the dry-season flow, after setting aside the flow that must stay in the stream for downstream users and aquatic life (the minimum flow set by the water resources authority, where one exists). For groundwater, compare the number and pumping rates of wells with the observed water-level trend.
5. **Consult:** upstream and downstream villages; water-user associations, including women and poorer farmers; the BWS/BBWS or PU SDA office, which also issues water-use approvals under MPWH Regulation No. 2/2024; and the district agriculture office.
6. **Decide:** where there is clearly enough water, the schemes proceed with the ESCOP 9 measures. Where water is tight, or the data are too poor to tell, the DCT sets conditions such as phasing the schemes, lowering the design abstraction or the irrigated area, water-saving irrigation, storage to shift use to the wet season, an agreed rotation schedule, another source, or dropping a scheme. A hydrologist engaged by the PIU or CPMU is used where the data are insufficient, the source feeds a sensitive area, or the schemes span more than one district.
7. **Record and follow up:** keep a short record (map, list of schemes and abstraction rates, flow estimate, consultation and decision) in the district file and refer to it in Part BIO-3 of Form BIO (check 9) for each scheme. Monitor dry-season flows and complaints, and repeat the check whenever a new scheme is proposed from the same source.

B. Biodiversity-sensitive areas

The check is required when, within one landscape unit:

- three or more Project activities with a new footprint outside the settlement (buildings, ponds, cleared land, tracks, towers, jetties) are proposed or built in villages flagged B or C around the same protected area, forest block, mangrove belt, peat hydrological unit, karst area, reef or lake;
- two or more ecotourism sites, trails or visitor facilities depend on the same protected area, beach, reef, cave, waterfall or wildlife site;

- new or expanded fishponds, cages or landing facilities are proposed in a mangrove belt, estuary, lake or bay where Project-supported ponds, cages or landing facilities already exist;
- several improved tracks, bridges, towers or power lines together open access to the same forest block or natural habitat, even where each stays outside it;
- the DCT, the CPMU, the managing authority or the community reports signs of combined pressure, such as more hunting or clearing, more conflict with wildlife, or crowding at a site.

How to carry out the check: follow steps 1 to 7 above, with these changes:

- steps 1–2: map the natural habitat in the unit and all Project and other activities in or near it, using the Register layers and the site data in Form BIO;
- step 3: instead of the water available, look at what the area can take: the size and condition of the habitat, wildlife movement routes, the zoning and management plan of the protected area and, for visitor sites, the carrying capacity set under Annex V (Section 13.5);
- step 4: judge whether the activities together would reduce or split the habitat, increase access or disturbance, or exceed visitor or harvest limits;
- step 5: consult the managing authority (Balai Taman Nasional, BKSDA, KPH, DKP or DLH), the villages around the area and Masyarakat Adat where present;
- step 6: conditions may include grouping footprints on land that is already modified, one shared access route instead of several, phasing, a combined visitor limit and schedule, a village agreement on resource use, a shared Biodiversity Management Plan, or dropping activities. Where the combined effect on natural or critical habitat may be significant, the activities are treated as Category C under Annex V;
- step 7: record the result in Part BIO-3 of Form BIO (check 9) for each activity concerned.

C. Clusters of similar investments

The check is required when, within one landscape unit:

- three or more facilities of the same type, such as livestock pens, slaughter points, dairy or fish processing units, agroprocessing units, tofu or tapioca units, or fishponds, discharge wastewater, manure or effluent to the same river reach, lake or stretch of coast, in particular upstream of a drinking-water intake, bathing place or fishing area;
- several biomass-fired dryers, ovens, boilers or smokehouses draw fuelwood from the same forest or village woodland;
- several works draw sand, gravel, stone or timber from the same river, quarry or forest;
- several facilities that cause odor, noise, smoke or traffic are grouped near the same settlement, school or health facility;
- the DCT, the CPMU, the DLH or the community reports signs of combined pollution or pressure on a resource.

How to carry out the check: follow steps 1 to 7 above, with these changes:

- steps 1–3: list each facility with its type and size (for example number of animals, tons processed or pond area) and the wastewater, waste or resource use stated in its design and ESCOP; note how the receiving water is used (drinking, bathing, fishing, irrigation) and any water-quality data held by the DLH;
- step 4: judge whether the combined load could make the water unfit for its use or exceed national standards, or whether the resource is being used faster than it can recover;

- step 5: consult the users of the receiving water or resource, the DLH and the relevant technical office;
- step 6: conditions may include shared treatment (for example one manure composting or biogas unit, or one wastewater treatment unit for several processors), siting facilities on different reaches or away from intakes, a limit on the number or size of units, solar or LPG drying instead of fuelwood, a supply of legal timber and quarry material, or phasing;
- step 7: record the result in the district file and in the screening record of each facility.

Monitoring and yearly review

The DCT follows up the conditions set by each check through field monitoring (ESCOP Field Monitoring Checklist, Part C) and the grievance mechanism. Once a year, the CPMU maps all Project investments by landscape unit and type in KRISNA, identifies new clusters, and reviews the evidence of combined effects: complaints about water shortage, pollution, conflict with wildlife or crowding; dry-season flow and water-quality records where available; and the monitoring reports of the activities concerned. Where it finds a problem, the CPMU sets corrective measures and may adjust the triggers, the Village Biodiversity Sensitivity Register or the investment menu for the area. The number of checks carried out, the clusters identified, the conditions set and the activities changed or dropped are reported in the semi-annual E&S monitoring report (ESCP Action C).

5.4. E&S Risk Management Tools

To effectively oversee the environmental and social (E&S) impacts of the SEHATI Project, several dedicated management instruments have been developed. As the project progresses, further site-specific tools will be introduced as needed.

Here is the overview of the SEHATI Project's E&S management tools:

- **Project Operations Manual (POM):** This central guidebook directs the daily execution of the SEHATI Project, encompassing financial management, institutional arrangements, procurement, and E&S protocols. Essential E&S workflows drawn from the ESMF and related documents will be embedded directly into this manual.
- **Environmental and Social Management Framework (ESMF):** Functioning as SEHATI's overarching E&S strategy, this framework provides the blueprint for evaluating subprojects to ensure no environmental or social concerns slip through the cracks. The core practices for daily E&S risk management are extracted from here and integrated into the POM. The ESMF includes the following specialized annexes:

  - **Exclusion List:** A definitive roster defining which specific activities and project types are strictly ineligible to receive SEHATI funding.
  - **E&S Screening Form:** A standardized evaluation template used to assess potential E&S risks and weigh site selection factors for new subprojects.
  - **Environmental and Social Codes of Practice (ESCOP):** Practical, on-the-ground guidelines outlining the required actions to prevent or reduce negative impacts on local communities and the environment.
  - **Environmental and Social Management Plan (ESMP):** Customized, highly detailed mitigation strategies that must be formulated for any SEHATI subprojects deemed large or complex.

- **GBV Prevention and Response Action Plan:** A targeted framework detailing how the project will proactively prevent, mitigate, and handle any risks associated with gender-based violence (GBV) and sexual exploitation, abuse, or harassment (SEA/SH).
- **Labor Management Procedure (LMP):** A set of operational rules defining the various worker classifications involved in the project and establishing the standards for their fair treatment and supervision.
- **Land Access Procedure:** The guiding principles for how the project will handle land requirements, specifically covering the protocols for voluntary land donations and the allocation of state land for community benefit.
- **Social and Conflict Analysis:** An analytical mechanism designed to spot existing community tensions, unrest, or conflicts in SEHATI's operational zones, ensuring project activities mitigate rather than aggravate these issues.
- **Incident Reporting Procedures:** The official, step-by-step protocol that project managers must use to document, report, and investigate any adverse events.
- **Biodiversity Screening Procedure:** A preliminary assessment utilized during the planning phases of a subproject to identify hazards to local flora and fauna, ensuring the conservation of natural living resources.
- **Cultural Heritage Screening:** An evaluation tool implemented to determine whether planned SEHATI activities might negatively affect tangible historical sites or the intangible cultural traditions of target communities.
- **Chance Find Procedure:** The mandated emergency protocol to halt work and take action if construction crews unexpectedly unearth historical artifacts, sites of cultural importance, or unexploded ordnance (UXO)

5.5. Summary of Environmental & Social Risks, Mitigation, and Management Tools

Table 8. Summary of E&S Risks, Mitigation and Management Tools

ESS World Bank	Key Environmental and Social Risks	Component	Mitigation Measures	Management Tools	Responsible Entity	Timeframe
ESS1 – Assessment and Management of Environmental and Social Risks and Impacts						
1. Inadequate E&S screening capacity at village level. 2. Cumulative impacts from The 6,085-entry longlist will be screened to target approx. 5,000 villages without coordinated oversight. 3. Absence of E&S expertise among village governments and local facilitators. 4. Weak monitoring and reporting of E&S performance during implementation. 5. Gaps in environmental and social regulations at sub-national level.		C1, C2, C3	1. Implement ESMF including mandatory E&S screening checklist for each activity. 2. Prepare site-specific ESMPs/UKL-UPL for activities with moderate-substantial risk. 3. Appoint dedicated E&S Specialists at the CPMU and E&S Focal Points at the CPIU and PIUs (ESCP Action A). 4. Conduct cascade training for district coordinators, village facilitators, and village governments on E&S requirements. 5. Integrate E&S performance into project M&E system with quarterly reporting. 6. Check the combined effects of Project investments that share a water source, a biodiversity-sensitive area or a receiving river, coast or resource (cumulative impact check, Section 5.3), and identify Associated Facilities during screening (Section 1.3; ESCP Action 1.5).	ESMF ESCP ESMP/UKL-UPL/SPPL Exclusion List; E&S Screening Form; ESCOP Cumulative Impact Check (Section 5.3); Associated Facilities screening (Annex II, Section 3) Environmental Approval(UKL-UPL/SPPL) Semi-annual E&S Monitoring Report (ESCP Action C)	CPMU/MoVDA (E&S Specialists) CPIUs (MoHA, MoVDA) PIUs (Ditjen PDP, PPEI, BPPD, BPSDM; Ditjen Bangda, PGD; MoF) District Coordination Teams Village Governments	ESMF finalized before Board approval. E&S screening before each village activity approval. ESMPs prepared before civil works commence. Monitoring throughout project implementation (2027–2032). Semi-annual reporting to the World Bank, within 45 days after each period (ESCP Action C).
ESS2 – Labor and Working Conditions						
1. OHS risks in civil works (construction injuries, falls, equipment accidents). 2. OHS risks in agroprocessing, livestock, and aquaculture activities. 3. Risk of child labor in village-level productive activities. 4. Forced/compulsory labor through community contributions misuse.		C1, C2, C3	1. Implement Labor Management Procedure (LMP) covering all worker categories. 2. Require OHS Plan for all civil works; provide PPE and safety training before commencement. 3. Strict prohibition of child labor (no one under 15, and no one under 18 in hazardous work; SEHATI Exclusion List No. 9); age verification by all implementers and contractors. 4. Voluntary community contribution protocols with documented consent and limits.	Labor Management Procedure (LMP) OHS Plan Code of Conduct (SEA/SH) Community Contribution Guidelines Worker GRM (SIPEMANDU)	CPMU/MoVDA (E&S and HR Specialists) CPIUs and PIUs Contractors and Supervising Consultants Village Governments (for community workers) District Coordination Teams	LMP finalized before Effective Date. OHS Plans before worker mobilization. Code of Conduct signed before engagement of any worker. Age verification and contract documentation before activity start. Monitoring throughout implementation.

ESS World Bank	Key Environmental and Social Risks	Component	Mitigation Measures	Management Tools	Responsible Entity	Timeframe
5. Inadequate wages, informal employment, and lack of contracts for community workers. 6. Discrimination against women and vulnerable groups in employment.			5. Ensure minimum wage compliance, written contracts, and access to grievance mechanism. 6. Gender-inclusive recruitment targets; anti-discrimination clauses in contracts. 7. Prohibit SEA/SH; implement Code of Conduct for all workers.			
ESS3 – Resource Efficiency and Pollution Prevention and Management						
1. Wastewater from agroprocessing, fish, milk and meat processing units, and domestic wastewater from toilets at facilities and tourism sites. 2. Solid and liquid waste from food processing and packaging activities. 3. Pesticide and chemical fertilizer runoff affecting water quality in food security activities. 4. Aquaculture effluents (excess feed, chemicals) degrading coastal/freshwater ecosystems. 5. Air pollution (dust, odor, emissions) from processing facilities and livestock activities. 6. Overuse of natural resources (water, land, biomass) without efficiency measures. 7. Livestock manure, urine and wastewater from pens, composting units and biogas digesters. 8. Hazardous (B3) waste (used oil, batteries, e-waste, veterinary waste, pesticide containers) and refrigerant leakage from cold storage, ice makers and milk chillers.		C1, C2	1. Require wastewater treatment before discharge, meeting MoE Regulation No. 5/2014 (as amended), MoE/BPLH Regulation No. 11/2025 (domestic), 1/2025 (shrimp ponds) and 2/2026 (feed production). 2. Segregate waste at source; send recyclables to TPS3R or waste banks and residual waste to the district landfill (TPA); no open burning. 3. Promote Integrated Pest Management (IPM); use only pesticides registered with the Ministry of Agriculture and not in WHO Class Ia, Ib or II (SEHATI Exclusion List No. 8). 4. Adopt sustainable aquaculture practices; control stocking density and feed inputs. 5. Prioritize solar dryer domes for processing facilities; fit burners with chimneys and locate odorous or noisy facilities away from houses and operate machines during daytime. 6. Promote water efficiency and renewable energy use in productive activities. 7. For subprojects with an ESMP or UKL-UPL, regular environmental monitoring (water, soil, air) as set in that document, with results reported quarterly; other subprojects are checked with the ESCOP Field Monitoring Checklist. 8. Use non-ODS, low-GWP refrigerants; compost manure or use it in biogas digesters; hand B3 waste to suppliers (take-back), Puskeswan or licensed collectors	ESMF/ESMP (Exclusion List / ESCOP) Waste Management Plan Wastewater Management Plan IPM Guidelines Environmental Approval (UKL-UPL/SPPL) Environmental Monitoring Report	CPMU/MoVDA (E&S Specialists) PIUs (relevant technical units) Village Governments and BUM Desa Contractors and Equipment Suppliers DLH (District Environment Agency) for monitoring	Pollution prevention measures in ESMP before activity approval. Wastewater treatment operational before facility commissioning. Environmental monitoring throughout implementation. Reporting to World Bank semi-annually.
ESS4 – Community Health, Safety, and Security						

ESS World Bank	Key Environmental and Social Risks	Component	Mitigation Measures	Management Tools	Responsible Entity	Timeframe
1. Community health and safety risks during construction (accidents, dust, noise, vibration). 2. Disease vector proliferation from standing water in irrigation/aquaculture facilities. 3. Road safety risks from increased vehicle traffic during construction. 4. SEA/SH risks from worker influx into villages. 5. Community exposure to hazardous materials (chemicals, construction materials). 6. Waterborne disease risks from contaminated water sources near processing facilities.		C1, C2	1. Implement community health and safety measures in all ESMPs; restrict construction hours. 2. Develop vector control plan for water-related infrastructure; drainage design. 3. Traffic Management Plan for construction phases; community safety signage. 4. SEA/SH Code of Conduct mandatory for all project workers; report and response protocol. 5. Safe storage and handling of hazardous materials; community notification. 6. Water source protection measures near processing facilities. 7. Community awareness campaigns on construction safety and health.	ESMF/ESMP SEA/SH Prevention and Response Protocol Traffic Management Plan Community Health and Safety Plan GRM (SIPEMANDU, SP4N-LAPOR!)	CPMU/MoVDA (E&S and Social Specialists) CPIUs and PIUs Contractors (community safety officer) Village Governments Puskesmas (Community Health Centers) District Police (Polsek) for security incidents	SEA/SH protocol before worker engagement. Community health and safety measures before construction. Traffic management during all construction phases. GRM operational before village proposal development and community decision-making begin (ESCP Action 10.2). Monitoring throughout implementation.
ESS5 – Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement						
1. Land access requirements for village infrastructure (roads, processing facilities, ponds). 2. Risk of coercion in voluntary land donation processes. 3. Economically or physically displaced communities without proper compensation. 4. Loss of livelihoods for communities relying on affected land. 5. Land tenure disputes (informal rights, adat/customary land) not documented. 6. Inadequate compensation processes not meeting ESS5 requirements.		C1, C2	1. Implement Land Access Procedure (LAP) with mandatory screening for all infrastructure activities. 2. Land donation only where genuinely voluntary, with informed consent, no coercion, independent witness, documented agreement. 3. Prioritize community-owned or government land to avoid private acquisition. 4. No land purchase or compulsory acquisition. Activities that would cause physical or significant economic displacement, involve disputed land or lack demonstrably voluntary agreement are excluded, redesigned or relocated (ESCP Action 5.1; Annex VI). 5. Conduct land tenure assessment and recognize informal/customary rights. 6. Temporary access restrictions and minor impacts on non-land assets or livelihoods managed under the LAP. 7. Damage to crops, assets or land beyond the agreed voluntary contribution repaired or compensated in line with the LAP.	Land Access Procedure (LAP) Village Land Due Diligence Checklist (Annex VI) Land Screening Checklist Voluntary Land Donation Protocol GRM (SIPEMANDU)	CPMU/MoVDA (Social Specialists) PIUs (Ditjen PDP, Ditjen Bangda) District Coordination Teams (BPN coordination) Village Governments BPN (National Land Agency) for land registration	LAP finalized as part of ESMF before Board approval. Land screening before village activity proposal approval. Land due diligence and any LAP measures completed before approval and before the land is used (ESCP Action 5.1). Monitoring of land access throughout implementation. Completion report before project close.
ESS6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources						

ESS World Bank	Key Environmental and Social Risks	Component	Mitigation Measures	Management Tools	Responsible Entity	Timeframe
1. Habitat degradation from infrastructure construction near ecologically sensitive areas. 2. Overfishing of local fish stocks supported by new landing sites, ice makers and cold storage, and use of prohibited fishing gear. 3. Introduction of invasive species through aquaculture (non-native fish/shrimp). 4. Mangrove/coastal ecosystem degradation from fish pond expansion. 5. Forest clearing for agroprocessing or ecotourism facilities in or near protected areas. 6. Reduction of wildlife corridors from village infrastructure development. 7. Reduced flow for aquatic habitats from water abstraction for irrigation, clean water and reservoirs		C1, C2	1. Biodiversity screening (ESMF Annex V) for all activities; avoid critical habitats. 2. Sustainable fisheries practices aligned with KKP regulations; respect fishing zones, closed seasons and minimum sizes; no fishing gear prohibited under MMAF Regulation No. 36/2023 (SEHATI Exclusion List No. 19). 3. Restrict use of non-native species without proper risk assessment and authority approval. 4. No conversion of mangroves, wetlands or peat for ponds or other facilities (SEHATI Exclusion List No. 15). 5. Set daily visitor limits agreed with the village and, near sensitive areas, with the area manager; no physical works inside, or within 1 km of, a conservation area, marine conservation area or protection forest, and none in critical habitats (SEHATI Exclusion List No. 4). 6. Biodiversity Management Plan for sensitive areas; restoration of degraded habitats. 7. Regular biodiversity monitoring for activities in sensitive areas.	ESMF (Exclusion List / ESCOP) ESMP (biodiversity chapter)\ Biodiversity Management Plan Environmental Approval(UKL-UPL/SPPL)	CPMU/MoVDA (E&S Specialists) PIUs (Ditjen PPEI for ecotourism; KKP coordination for fisheries) Ministry of Forestry (BKSDA / Balai Taman Nasional) for consultation on activities near conservation areas Village Governments District DLHK (Environment and Forestry Agency)	Biodiversity screening before activity approval. Biodiversity Management Plan before construction in sensitive areas. Sustainable fisheries measures before aquaculture activities commence. Monitoring throughout implementation; annual biodiversity report.
ESS7 – Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities						
1. Presence of Masyarakat Adat (indigenous/traditional communities) in longlist 6.085 villages. 2. Exclusion of Masyarakat Adat from project benefits due to language, cultural barriers. 3. Adverse impacts on customary lands, territories, and natural resource rights. 4. Inadequate or absent Free, Prior, and Informed Consent (FPIC) processes. 5. Activities incompatible with Masyarakat Adat cultural practices and livelihoods. 6. Cultural identity and traditional knowledge erosion from economic activities.		C1, C2,	1. Implement IPPF with mandatory screening to identify Masyarakat Adat presence. 2. Prepare Indigenous Peoples Plan (IPP) for activities in areas with Masyarakat Adat. 3. Apply FPIC process before any activity affecting Masyarakat Adat communities. 4. Culturally appropriate engagement in local languages; use of traditional communication channels. 5. Incorporate Masyarakat Adat priorities in village proposals; benefit-sharing mechanisms. 6. Protect customary land rights; no displacement of Masyarakat Adat without FPIC. 7. Include Masyarakat Adat representatives in project GRM and monitoring committees.	Indigenous Peoples Planning Framework (IPPF) Indigenous Peoples Plan (IPP) — if triggered FPIC Protocol Social Assessment SEF (targeted engagement chapter) GRM (SIPEMANDU with Masyarakat Adat access)	CPMU/MoVDA (Social Specialists) PIUs (Ditjen PDP, Ditjen PPEI) District Coordination Teams Village Governments AMAN (Indigenous Peoples Alliance) — consultation partner Kemendikbud (for cultural heritage coordination)	IPPF finalized as part of ESMF before Board approval. Masyarakat Adat screening before village activity selection. FPIC process completed before any activity in Masyarakat Adat areas. IPP implemented throughout project in affected areas. Annual monitoring report on Masyarakat Adat inclusion and benefit-sharing.
ESS8 – Cultural Heritage						

ESS World Bank	Key Environmental and Social Risks	Component	Mitigation Measures	Management Tools	Responsible Entity	Timeframe
1. Physical cultural resources (temples, historical structures, archaeological sites) in project areas. 2. Chance finds of archaeological artifacts during excavation and civil works. 3. Disruption to intangible cultural heritage (ceremonies, traditional practices) from ecotourism. 4. Damage to cultural landscapes from infrastructure construction. 5. Commercialization of cultural practices potentially altering their authenticity.		C1, C2	1. Cultural heritage screening for all civil works activities; mapping of known heritage sites. 2. Implement Chance Find Procedure: stop work, notify authorities, document, assess before resuming. 3. Coordinate with Kemendikbud (Ministry of Education and Culture) and local cultural authorities. 4. Ecotourism development respects traditional practices; community consent for cultural use. 5. Buffer zones around known heritage sites; avoid infrastructure in heritage-sensitive areas. 6. Document and preserve intangible heritage; community-led cultural interpretation in ecotourism.	Cultural Heritage Procedures (part of ESMF) Chance Find Protocol Cultural Heritage Screening Checklist ESMP (cultural heritage chapter) Environmental Permit (if cultural heritage permit required)	CPMU/MoVDA (Social Specialists) PIUs (Ditjen PPEI for ecotourism) Village Governments Kemendikbud/BPCB (Regional Cultural Heritage Preservation Agency) Contractors (stop-work and notification responsibility)	Cultural heritage screening before activity approval. Chance Find Procedure activated immediately upon discovery during civil works. Cultural heritage protection measures throughout construction. Post-construction assessment before project activities commence in sensitive sites.
ESS10 – Stakeholder Engagement and Information Disclosure						
1. Inadequate information disclosure on project activities, benefits, and E&S impacts. 2. Exclusion of marginalized groups (women, elderly, Masyarakat Adat, persons with disabilities) from consultation. 3. Language and literacy barriers in accessing project information (The 6,085-entry longlist will be screened to target approx. 5,000 villages). 4. Ineffective GRM — grievances not recorded, responded to, or resolved timely. 5. Limited stakeholder awareness of E&S standards and community rights. 6. Weak feedback mechanisms from villages to national project management.		C1, C2, C3	1. Implement SEF with differentiated engagement strategies for all stakeholder groups. 2. Disclose all project documents (ESMF, ESCP, SEF, LMP, LAP, IPPF) on MoVDA website and local media. 3. Produce information materials in local languages and accessible formats (visual, audio). 4. Establish multi-tier GRM: village-level → district → SIPEMANDU (national) + SP4N-LAPOR! hotline. 5. Regular community consultation (at least quarterly at village level) throughout implementation. 6. Include vulnerable groups in GRM committees; ensure confidential reporting channel for SEA/SH. 7. Annual stakeholder engagement report; World Bank mission access to GRM records.	Stakeholder Engagement Framework (SEF) GRM (SIPEMANDU, SP4N-LAPOR!) Information Disclosure Plan Community Consultation Records ESCP (stakeholder engagement commitments) Annual Stakeholder Report	CPMU/MoVDA (Communication and Social Specialists) CPIUs (MoHA, MoVDA) PIUs (all implementing units) District Coordination Teams Village Governments (village-level GRM) SIPEMANDU (national GRM management)	SEF finalized before Project Effectiveness. GRM established and operational before village proposal development and community decision-making begin (ESCP Action 10.2). Information disclosure before any activity at community level. Stakeholder engagement throughout implementation (2027–2032). Semi-annual GRM performance report to World Bank.

6. Process to Manage Environmental and Social Issues

Table 9. Processes to manage environmental and social issues throughout the subproject cycle

Project Stage	E&S Stage	E&S Management Process
Initial engagement – national project preparation	**Project Preparation**	Preparing E&S documents, procedures, and mechanism such as ESMF, SEF, LMP, LAP, FGRM, IPPF, E&S Risks Assessment, CHS management framework, Cultural Heritage management framework, Biodiversity Screening Procedure, exclusion list, and E&S screening form.
Initial engagement – local validation	**Information Disclosure**	Conduct pre-appraisal to identify existing practices on E&S procedures at the district and village level, knowledge and capacity related to E&S management, and local challenges that might hinder the implementation of E&S standards at the district and village levels.
Village selection & socialization	**Screening**	Disclose information about the SEHATI project and E&S instruments to CPIUs, PIUs, village government, village communities, contractors, and suppliers. Consult relevant stakeholders on the E&S instruments based on the SEF document. Disclose the village selection criteria and the exclusion list. The MoVDA team selects villages that meet the requirements and criteria to be funded by the SEHATI Project. Inform the FGRM for the SEHATI Project.
Proposal development and E&S screening	**Screening**	Selected village governments write proposals using the MoVDA template, which includes the E&S screening form. Village governments assisted by Village Facilitators submit the proposal via KRISNA. The district team and the MoVDA team review the proposal via KRISNA, and provide constructive feedback. The village government revises and resubmits the proposal (if needed). The screening also identifies any Associated Facilities and the party responsible for them, and notifies the DCT E&S focal point, who refers them to the CPMU for determination before approval (Annex II, Section 3; Section 1.3). Where several Project investments share a water source, a biodiversity-sensitive area or a receiving river, coast or resource, the DCT carries out the cumulative impact check (Section 5.3).
Indigenous Peoples engagement (where applicable)	**Planning**	The PIUs must conduct meaningful consultations with *Masyarakat Adat* if the SEHATI project affects *Masyarakat Adat*. Please refer to SEF, IPPF, and FPIC documents. The CPMU and CPIUs provide technical assistance and capacity building programs to support the PIUs.
Detailed preparation & readiness review	**Planning**	PIUs check the detailed preparation such as checking the environmental document needed or clean and clear land status before fund disbursement.
Digital Connectivity Planning & Deployment	**Planning**	Developing and maintaining digital connectivity of planning and deployment for the SEHATI Project, including fund disbursement, project report and review, FGRM, monitoring and evaluation.
Pre-construction & implementation	**Implementation**	Implementing proposed activities based on the ESMF
Productive support & market access	**Implementation**	Implementing proposed activities based on the ESMF

Project Stage	E&S Stage	E&S Management Process
Monitoring, operation, & evaluation	**Monitoring and Evaluation**	Monitor the implementation of ESMF throughout the project cycle. Prepare and submit semi-annual ESMF implementation progress report to the Bank and publish it online for the evaluation process. Monitor the complaints submitted to SIPEMANDU and SP4N-LAPOR!, follow up and solve the complaints. Check whether there are outstanding unresolved complaints addressed to the MoVDA with SEHATI Project category on SIPEMANDU website.
Final Project & ESMF Report	**Project Closing**	Prepare and submit final report of the ESMF implementation with evidence documents needed

7. Implementation Arrangements

At the national level, the management of the SEHATI Project utilizes a single line of coordination and project accountability through the CPMU, under the Secretary-General of the Ministry of Villages and Development of Disadvantaged Regions (MoVDA). The Planning Bureau supports the coordination and management of the CPMU, including the consolidation of planning/AWPB (Annual Work Plan and Budget), progress monitoring, reporting, risk management, as well as cross-unit and inter-ministerial/institutional integration as mandated. Technical units/PIUs/PIOs are responsible for the delivery of their respective domains without establishing parallel approval lines that obscure accountable authority.

7.1. Core Organizational Structure

Steering Committee (the Ministry of National Development Planning/National Development Planning Agency (Kementerian PPN/Bappenas)

- The SEHATI project will involve the Ministry of National Development Planning/National Development Planning Agency (Kementerian PPN/Bappenas) as the Steering Committee to provide supervision in the coordination and monitoring of the project's implementation.

CPMU (the Ministry of Village Development and Disadvantaged Region)

- The CPMU is responsible for the overall integration and control of the SEHATI Project's implementation. This includes ensuring consistency among implementing units, consolidating planning and reporting, achieving project outcomes, managing risks, coordinating fiduciary and E&S (Environmental and Social) matters, and resolving issues that require escalation. The CPMU ensures that decision rights and evidence at each gate are documented and traceable.
- The CPMU conducts day-to-day project management, which involves coordinating overall implementation, consolidating the AWPB, monitoring progress, managing risks, facilitating cross-unit integration, and preparing approvals/authorizations in accordance with decision rights.

CPIU (the Ministry of Home Affairs)

- PIU Planning Consolidation: Consolidating all annual work plans and budgets (AWPB) from the PIUs within Kemendes PDT for submission to the CPMU.
- Reporting: Compiling consolidated implementation reports from all Kemendes PDT PIUs for the CPMU, covering preparation progress, physical progress, financial realization, issues encountered, and necessary corrective actions.
- Technical Coordination: Serving as the technical liaison between the Kemendes PDT PIUs and the CPMU, and coordinating with the Ministry of Home Affairs' CPIU regarding the technical synchronization of monitoring and reporting systems.
- Steering Committee Reporting: Providing periodic reports on project implementation to the Steering Committee.

PIUs

- The Project Implementation Unit (PIU) of the Ministry of Home Affairs is located within the Directorate General of Regional Development and the Directorate General of Village Government Affairs, and is responsible for the management of Components 1 and 2. Furthermore, the PIU of the Ministry of Villages and Development of Disadvantaged Regions is situated within the Directorate General of Village and Rural Development, the Directorate General of Economic Development and Investment for Villages and Disadvantaged Regions, the Agency for Human Resources Development and Community Empowerment of Villages and Disadvantaged Regions, and the Agency for Development and Information of Villages and Disadvantaged Regions. Finally, the PIU of the Directorate General of Fiscal Balance is located within the Directorate of Village Funds, Incentives, Special Autonomy, and Privileges, bearing responsibility for the management of Components 1 and 3.

- Activity Implementation: Responsible for executing activities related to productive rural infrastructure investments, strengthening rural community resilience, and developing standards for productive, environmentally friendly infrastructure.
- Procurement and Contract Management: Managing contracts, which includes preparing procurement documents, evaluating bids, signing contracts, and supervising contract execution within its purview.

District Coordination Teams

- Acts as the technical and managerial steering body at the district/city level to ensure the program is implemented efficiently and complies with safeguard standards.
- Technical & Policy Oversight: Aligning program work plans with regional development priorities and ensuring compliance with environmental and social standards (ESMF/LMP).

Village Governments

- Acts as the territorial owner, deliberation facilitator, and the entity accountable for activity implementation at the grassroots level.
- Public Participation Facilitation: Organizing Village Consultative Meetings (Musdes) to establish program priorities, determine beneficiaries, and disseminate information transparently.
- Environmental & Social Oversight (ESF): Ensuring that work execution complies with Occupational Health and Safety (OHS) provisions, preventing child labor, and managing village-level grievances.

Contractors

- Act as the technical executors of physical construction or as medium-to-large-scale service providers bound by formal work contracts.
- Technical Work Execution: Completing physical works in accordance with technical specifications, the estimated budget (RAB), and the agreed schedule.
- OHS & Labor Management Procedures (LMP) Implementation: Providing Personal Protective Equipment (PPE), ensuring fair and timely wage payments, and providing safe working facilities.
- Environmental Impact Mitigation: Managing construction waste, minimizing noise and dust disturbances, and restoring the work area's condition upon construction completion.

Suppliers

- Act as the supply chain providers for goods, building materials, and operational equipment that meet the program's standard qualifications.
- Quality Assurance & Timeliness: Providing materials and equipment that meet technical quality standards according to project specifications and delivering them on time.
- Sustainable Supply Chain Compliance (Primary Supply Chain): Ensuring that materials (such as quarried materials, wood, and sand) are legally sourced from environmentally friendly origins and are free from child or forced labor practices.

The World Bank

- The World Bank serves as the development partner, financier, and technical supervisor regarding the application of international standards.
- The World Bank's roles and responsibilities focus on ensuring accountability, transparency, and compliance with the Environmental and Social Framework (ESF).

7.2. Key Environmental and Social Roles

Table 10. Key E&S Roles

Level	Main Institutions	Key Responsibilities
National	MoVDA CPMU, supported by qualified Environmental and Social Specialists; and designated E&S Focal Points within relevant CPIUs/PIUs and World Bank Environmental and Social Standards (ESS) Specialists	• Prepare, maintain, and update the Environmental and Social Management Framework (ESMF). • Oversee and coordinate implementation of the ESMF, ESCP and other applicable E&S instruments and requirements across the Project. • Oversee the application of E&S screening, exclusion criteria, district verification, activity-level E&S instruments, monitoring, reporting, incident management, and corrective actions • Carry out risk-based quality assurance and periodic spot checks of village-level E&S screening, supporting documents and district verification; record findings, follow up corrective actions, and use the lessons to improve training, guidance and verification tools (ESCP Action 1.1). • Determine, with the CPIU/PIUs, whether facilities referred from screening are Associated Facilities, and set the measures needed (ESCP Action 1.5). • Provide technical guidance, capacity-building support, training, and conduct periodic monitoring and evaluation (M&E). • Manage the national-level Grievance Redress Mechanism (GRM) and submit periodic environmental and social performance reports to the World Bank.

Level	Main Institutions	Key Responsibilities
Regional	District Community and Village Empowerment Agency (PMD Office), Regional Project Implementation Units (PIUs), and Field Facilitators	• Ensure the integration of ESS principles and requirements into program planning and implementation at the regional and district/city levels. • Review and verify village-level E&S screening, including application of the exclusion list and identification of required E&S instruments or mitigation measures, as part of proposal verification • Coordinate and support E&S requirements within respective activities; monitoring and follow-up; coordination and escalation to CPMU E&S specialists • Supervise and monitor the implementation of environmental and social safeguards for regional subprojects. • Facilitate capacity building and provide technical assistance to village governments and community members. • Manage, process, and facilitate the resolution of grievances, feedback, and complaints received from communities at the regional level. • Escalate activities or issues requiring additional E&S review or specialist support to the relevant PIU/CPMU
Village	Village Government, Village Consultative Body (BPD), Village Cadres, and Community Groups	• Conduct environmental and social risk screening for village-level subprojects and activities. • Integrate E&S screening results, required mitigation measures, and other E&S requirements into the village proposal before submission/approval • Implement applicable E&S mitigation measures, including requirements related to labor and OHS, community health and safety, land access, stakeholder engagement and inclusion, Indigenous Peoples/Masyarakat Adat, biodiversity and cultural heritage, as identified through E&S screening • Ensure inclusive community participation, including women, older persons, and persons with disabilities, in village consultation and decision-making processes. • Establish and maintain local grievance and feedback channels, including the Village-Level Grievance Redress Mechanism (GRM).

7.3. Capacity Building Plan

In line with ESCP Action B, all target groups receive initial E&S training before village proposal development begins, and refresher training throughout implementation. Besides the topics in Table 11, training covers, as relevant: E&S screening and the Exclusion List; district verification; the Biodiversity Screening Procedure (Annex V); Associated Facilities determination; the cumulative impact check (Section 5.3); pollution prevention, including pesticides and IPM, and the response to

contamination; SEA/SH and GBV awareness and survivor-centered referral; incident reporting; and the E&S functions of the Project digital systems.

Table 11. Capacity Building Plan

Level	Responsible Entity	Target Audience / Participants	Topics / World Bank Environmental and Social Standards (ESS1–ESS10)
National Level	Central Project Management Unit (CPMU) / National Environmental and Social (E&S) Specialists	Ministry Technical Team, National Consultants, and Project Evaluators	**Framework and Strategic Management (ESS1, ESS 2 and ESS10):**
			• ESS1: Assessment and Management of Environmental and Social Risks and Impacts (ESMF and ESCP)
			• ESS2: Labor and Working Conditions, as there will be NMC, experts, and civil servant work on this project.
			• ESS10: Stakeholder Engagement and Information Disclosure (SEF), including the national Grievance Redress Mechanism (GRM)
District Level	Regional Project Implementation Unit (RPIU) / Relevant Local Government Agencies	Local Technical Teams, Regional Facilitators, and Field Consultants	**Operational Standards and Sector-Specific Safeguards (ESS2, ESS3, ESS4, ESS5, ESS6, ESS7, ESS8, and ESS10):**
			• ESS2: Labor and Working Conditions (LMP and Occupational Health and Safety [OHS])
			• ESS3: Resource Efficiency and Pollution Prevention and Management
			• ESS4: Community Health and Safety
			• ESS5: Small-Scale Land Acquisition and Voluntary Land Donation (VLD)
			• ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
			• ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities and Local Vulnerable Groups
			• ESS8: Cultural Heritage
			• ESS10: Community Grievance Submission and Resolution Process (Grievance Redress Mechanism)
Village Level	Village Activity Management Team (TPKD) / Village Facilitators	Village Head, Village Officials, Community Groups (Pokmas), Project-Affected Communities, and Vulnerable Groups	**Practical Application and Community Social Protection (ESS2, ESS3, ESS4, ESS5, ESS6, ESS7, ESS8, and ESS10):**
			• ESS2: Occupational Health and Safety for Local and Community Workers
			• ESS3: Resource Efficiency and Pollution Prevention and Management
			• ESS4: Community Health and Safety
			• ESS5: Small-Scale Land Acquisition and Voluntary Land Donation (VLD)
			• ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
			• ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities and Local Vulnerable Groups
			• ESS8: Cultural Heritage
			• ESS10: Community Grievance Submission and Resolution Process (Grievance Redress Mechanism)

7.4. Environmental and Social Risk Management Budget

Table 12. E&S Risk Management Budget

No.	Category & Component Details	Quantity	Duration / Frequency	Unit	Unit Cost (IDR)	Total Cost (IDR)	Remarks / Notes
1	**E&S Staff Salaries (Personnel)**						
1.1	E&S PMU Senior Specialist	1	12	Months	45,000,000	540..000.000	Primary coordinator for E&S aspects in the PMU
1.2	Environmental Specialist	1	12	Months	30,000,000	360.000.000	Focus on Environmental safeguard issue
1.3	Social Specialist	1	12	Months	30,000,000	360,000,000	Focus on social safeguard issue
1.4	PMU complaint handling specialist for GRM	1	12	Months	30,000,000	360,000,000	Management of communications & stakeholders
1.5	PMU Gender and GBV Specialist	1	12	Months	30,000,000	360,000,000	Gender mainstreaming & GBV/SEA prevention
1.6	PPO E&S Officer (Field)	38	12	Months	10,000,000	4,560,000,000	E&S officers at the provincial/site level (29 Province and two E&S officers per province)
2	**Communication & Grievance Redress Mechanism (GRM)**						
2.1	Toll-Free Line Services	1	12	Months	0	0	Operational costs & GRM call center subscription (use existing SIPEMANDU toll-free line)
2.2	E&S Website Development & Management	1	12	Months	10,000,000	120,000,000	Public portal for E&S documents & online GRM module
2.3	Advertising & Media Publication	1	12	Categor y	10,000,000	120,000,000	Mass/local media dissemination per quarter
2.4	Venue rental & catering for ToT	10	1	Activitie s	30,000,000	300,000,000	ToT in 10 locations across Indonesia, inviting 100 participants per site
2.6	Venue Rental & Catering for Consultations	10	2	Activitie s	30,000,000	600,000,000	Public consultations & community

No.	Category & Component Details	Quantity	Duration / Frequency	Unit	Unit Cost (IDR)	Total Cost (IDR)	Remarks / Notes
							dissemination in 10 locations organized twice
2.6	Printing of GRM Brochures, Guides & Forms	6,085	5	Copies	5,000	152,125,000	Printed E&S dissemination materials for citizens
3	**E&S Staff Official Travel (Per Province)**						
3.1	Field Flight Tickets	10	2	Visits	30,000,000	600,000,000	Periodic monitoring by PMU staffs to subproject provinces (return tickets for three E&S Officials)
3.2	Accommodation & Per Diem / Meals	20	3	Personnel	2,000,000	120,000,000	Three E&S officials travel for E&S supervision staying 2 nights per site and conducted two times in a year for each 10 sites.
3.3	Operational Car / Boat Rental	20	2	Days	1,000,000	40,000,000	Local transportation to remote subproject sites (rent cars or boats)
3.4	First Aid Equipment & Field Gear	3	1	Sets	500,000	1,500,000	PPE, First Aid Kits, GPS, & safety equipment
4	**E&S Workstation Equipment**						
4.1	Drone	1	1	Units	20,000,000	20,000,000	Drone to check environmental conditions and landscape
4.2	Field Communication Phone & Quota	0	0	Months	0	0	Phone credit & data packages for E&S staff
	TOTAL INDICATIVE ESMF BUDGET					**8,613,625,000**	

8. Stakeholder Engagement, Disclosure, and Consultations

The Stakeholder Engagement Framework (SEF) for the SEHATI Project ensures inclusive participation by classifying stakeholders into three primary categories. Project-Affected Parties (PAP) encompass individuals, households, or communities directly or indirectly impacted by the project, including village residents, infrastructure users, landowners, local businesses, women, youth, and project workers. Vulnerable Groups represent those who may be disproportionately marginalized due to socioeconomic, physical, or demographic factors, such as Indigenous Peoples (*Masyarakat Adat*), the elderly, persons with disabilities, women-headed households, and digitally underserved communities. Other Interested Parties (OIP) include entities with a vested interest in the project's outcomes, such as central and local government agencies, the World Bank, private sector partners, and civil society organizations.

Stakeholder engagement is guided by six core principles designed to foster trust and collaboration. Inclusivity ensures all stakeholders are systematically identified and barriers to participation are proactively addressed through targeted outreach. The project commits to early and sustained engagement, treating consultation as an iterative process that spans the entire project lifecycle rather than a one-off compliance task. Information accessibility dictates that project details are communicated proactively in clear, non-technical language and local dialects. Transparency guarantees that both positive impacts and potential adverse risks, along with agreed mitigation measures, are publicly disclosed. Furthermore, the project emphasizes two-way meaningful consultation, focusing on informed, coercion-free dialogue and closing the feedback loop by reporting how stakeholder input was utilized.

To support these principles, information disclosure will be proactive and accessible. The project will communicate its objectives, scope, duration, rights, and potential environmental and social risks to communities using multi-channel methods. These methods include written materials, audio formats, digital and social media, site flyers, and non-technical summaries, ensuring that all communications are easily understood by the target audience.

A cornerstone of the SEF is the Feedback and Grievance Redress Mechanism (FGRM), which provides a predictable and transparent system for recording and resolving concerns. The project will utilize SIPEMANDU as the main channel for grievance management. To maximize accessibility and accommodate diverse needs, this primary system is supported by alternative reporting channels including the national complaint portal SP4N-LAPOR!, WhatsApp, email, and phone lines. For stakeholders preferring direct communication, feedback and grievances can also be submitted orally through village facilitators (*pendamping desa*) or directly to the village government.

Further and detailed information about the SEF is available on the SEF document for SEHATI Project.

ANNEX I: Exclusion List

The exclusion list for activities or investment components under the **SEHATI Program** comprises activities that are ineligible for financing because they may pose significant environmental, social, or legal risks, or are inconsistent with the objectives of the Program.

ACTIVITIES	Checklist
1. List of activity under IFC Exclusion List a. Production or trade in weapons and munitions. b. Production or trade in alcoholic beverages (excluding beer and wine). c. Production or trade in tobacco. d. Gambling, casinos and equivalent enterprises. e. Production or trade in radioactive materials, except medical equipment, quality control (measurement) equipment, and any equipment where the radioactive source is trivial and adequately shielded. f. Production or trade in unbonded asbestos fibers. g. Drift net fishing in the marine environment using nets longer than 2.5 km. h. Commercial logging operations in primary tropical moist forest. i. Production or trade in wood or other forestry products other than from sustainably managed forests. j. Production or trade in any product or activity subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone-depleting substances, PCBs, and wildlife or products regulated under CITES.	
2. Forced displacement or involuntary resettlement of communities, or large-scale land acquisition that results in loss of livelihoods without the affected persons' consent.	
3. Activities subject to AMDAL requirements under MoEF Regulation No. 4/2021 on the List of Businesses and/or Activities Required to Have an Environmental Impact Assessment (AMDAL), Environmental Management and Monitoring Efforts (UKL-UPL), or an Environmental Management and Monitoring Statement (SPPL).	
4. Physical/construction activities located within, or within 1 km of, protected forests, national parks, nature reserves, wildlife sanctuaries or aquatic/coastal conservation areas, or located within natural/critical habitats with high conservation value. This item also covers the construction of new roads or tracks, and the upgrading of existing roads or tracks (such as widening, hardening or making them passable for vehicles), that lead to or pass through natural forest or other sensitive natural habitat (mangrove, peat, wetland or karst), where this would open or increase access and could lead to deforestation, encroachment or illegal occupation of land, illegal logging, hunting, or land conversion beyond the footprint of the investment. Routine maintenance or rehabilitation of an existing road within its existing alignment, width and surface type is not excluded.	
5. Activities that involve, or are likely to result in, the killing, capture, extraction, use, trade or destruction of protected species, whether whole or in parts or derivatives	

ACTIVITIES	Checklist
(e.g., meat, skin, shells, fins, feathers, eggs, wood, or bark), as protected under applicable national and international laws and regulations (including species listed in CITES Appendix I); for example, catching, keeping or selling sea turtles or their eggs.	
6. Activities involving the cultivation of non-native or potentially invasive species without adequate risk assessment and mitigation measures, including controls to prevent release into the natural environment, for example raising tilapia or other non-native fish in floating net cages in a natural lake or river without measures to stop fish escaping.	
7. Activities involving land clearing by burning.	
8. Procurement, storage, or use of hazardous pesticides classified by the World Health Organization (WHO) as Class Ia, Ib or II based on the hazard classification of the formulated product (WHO Recommended Classification of Pesticides by Hazard, 2019), pesticides not registered with the Ministry of Agriculture, or prohibited chemicals, including persistent organic pollutants (POPs) regulated under the Stockholm Convention and pesticides listed under the Rotterdam Convention.	
9. Use of child labor, including persons under 18 years of age in hazardous work or persons under 15 years of age in any work, as well as forced labor or bonded labor.	
10. Construction activities that damage or alter cultural heritage sites, sacred burial grounds, places of worship, or customary sites without authorization from the relevant local communities.	
11. Activities involving the appropriation or use of customary or Indigenous Peoples' lands without obtaining the Free, Prior, and Informed Consent (FPIC) of the affected Indigenous Peoples communities.	
12. Use of asbestos-containing materials (ACM) in new construction or rehabilitation of village facilities.	
13. Procurement or use of refrigeration equipment (cold storage, ice machines, freezers) that uses ozone-depleting substances (ODS) prohibited under the Montreal Protocol and applicable national regulations.	
14. Construction of large dams exceeding 15 meters in height, or other large-scale infrastructure requiring complex engineering and presenting potentially catastrophic risks.	
15. Conversion or clearing of forest, peatlands, mangroves or wetlands into agricultural land or village infrastructure, including new drainage in peat.	
16. Procurement of goods or implementation of activities associated with military or defense purposes, including dual-use goods that may contribute to armed conflict.	

ACTIVITIES	Checklist
17. Use of construction materials (sand, gravel, stone, fill soil) from unlicensed mines or quarries, or taken directly from riverbeds, beaches or mangroves, as well as coastal or water body reclamation.	
18. Extraction or destruction of coral reefs and seagrass beds, including extraction of coral for construction materials or lime.	
19. Fishing using explosives, poison, chemicals, biological agents, or electricity, as well as the use of prohibited fishing gear (MMAF Regulation No. 36/2023, Articles 8 and 10).	
20. Production, trade, or use of goods and activities that are illegal under Indonesian laws and regulations or ratified international conventions.	

Any activity meeting one or more of the above criteria shall be screened out and shall not be eligible for financing under the SEHATI Program.

ANNEX II: Environmental and Social Screening Form

Environmental and Social Screening Form

SECTION 1: ENVIRONMENTAL RISK SCREENING				
No.	**Screening Question**	**No**	**Yes**	**Remarks**
1.1	Water and Soil Quality: Is the proposed activity likely to generate liquid or solid waste, or contaminate community drinking-water sources? Will it cause erosion, sedimentation or increased turbidity in rivers, ponds, canals or coastal waters, including from earthworks and in-water works such as piers, jetties and ponds?			
1.2	Waste Management: Will the proposed activity generate agricultural waste, tourism-related waste, or hazardous and toxic waste (B3), such as used oil or empty fertilizer or pesticide containers? If yes, is an appropriate waste management system in place or planned, particularly for hazardous and toxic waste (B3), including proper storage, handling, transportation, treatment, and disposal?			
1.3	Resource Use: Will the activity take water from a drilled well, spring or river? If "Yes": do nearby wells or springs already dry up in the dry season, and will the planned use be more than the source can supply in the dry season? If either is "Yes", redesign the activity (e.g., rainwater harvesting, another source or a smaller abstraction). Where the activity draws groundwater, check which of the following applies (MoEMR Regulation No. 4/2026, Articles 2 and 6). Use for a business, including by a BUM Desa or cooperative, requires a groundwater business license (Izin Pengusahaan Air Tanah) through OSS. A group well drilled or dug with Project funds, and use for basic household or group needs of 100 m^3 per month or more, require a groundwater use approval (Persetujuan Penggunaan Air Tanah). Smallholder farming that is not a business, and basic needs below 100 m^3 per month, need neither. Where it is unclear, ask the provincial ESDM office.			
1.4	Disaster & Climate Risk: Is the activity located in an area prone to flooding, landslides, coastal erosion, tidal flooding/sea-level rise, earthquakes, tsunamis, drought, forest/land fires, or strong winds? If "Yes", adapt the design (raised floors, drainage, slope protection), or choose another site where the risk cannot be reduced by site choice or design.			

SECTION 1: ENVIRONMENTAL RISK SCREENING				
No.	**Screening Question**	**No**	**Yes**	**Remarks**
1.5	Noise & Dust: Will physical/construction work generate noise/dust that disturbs public facilities (schools, community health posts)?			
1.6	Biodiversity & Habitat: Could the activity result in clearing of natural vegetation, disturbance of natural/sensitive habitats, or disturbance to flora/fauna around the site? Does it affect mangroves, peatland, wetlands, coral reefs or seagrass beds?			
1.7	Invasive / Non-native Species: Does the activity involve the introduction, cultivation, utilization, propagation, trade, or other use of non-native or potentially invasive species that could adversely affect native species, habitats, or ecosystems? If "Yes", assess the risk of introduction or spread of invasive species and implement appropriate mitigation measures, including controlled and legal sourcing, prevention of escape or release into the natural environment, containment and monitoring measures, and avoidance of activities where significant ecological impacts cannot be adequately managed.			
1.8	Threatened Species: Does the activity involve the extraction, use, or trade of species classified as Vulnerable (VU), Endangered (EN), or Critically Endangered (CR) on the IUCN Red List of Threatened Species from wild populations? Includes CITES Appendix II species. If "Yes", apply mitigation: avoid important habitats and breeding seasons; use only legal sources, captive-bred/farmed sources, or sources covered by applicable quotas/permits; limit the amount of use to ensure sustainability; consult BKSDA/relevant government agencies or experts; monitor utilization.			
1.9	Land Use and Land Clearing: Will the activity convert land use, clear vegetation, strip topsoil, or involve cut-and-fill work on slopes? What clearing method will be used (manual, mechanical, or herbicide)? Clearing by burning is not permitted (SEHATI Exclusion List No. 7). State how felled vegetation, timber and topsoil will be handled (reused, stacked, stockpiled for reinstatement), and whether clearing will take place during the rainy season. State the area to be			

SECTION 1: ENVIRONMENTAL RISK SCREENING				
No.	**Screening Question**	**No**	**Yes**	**Remarks**
	cleared and whether erosion, landslide or loss of productive land could result.			
1.10	Air Quality and Odor: Will the activity generate emissions or odor that could disturb nearby households, for example fuel- or biomass-fired dryers, generators, processing equipment, manure storage, composting or waste storage?			
1.11	Pesticides, Fertilizers and Veterinary Medicines: Will the activity use, store or dispose of pesticides, fertilizers or veterinary medicines? If "Yes", apply integrated pest management, use only products registered in Indonesia and not in WHO Class Ia, Ib or II, provide safe and locked storage, PPE and triple-rinsing and collection of empty containers.			
1.12	Fuel, Oil and Hazardous Materials: Will the activity store or handle fuel, oil, paint or chemicals (generators, boat engines, tractors, processing machines) with a risk of spills to soil or water? If "Yes", store on an impermeable surface with drip trays and secondary containment and keep a spill kit and response procedure.			
1.13	Energy, Refrigerants and E-waste: Will the activity use refrigeration or cold-chain equipment, solar systems, batteries or digital equipment? If "Yes", select energy-efficient equipment, use non-ozone-depleting and low-GWP refrigerants, service units to prevent leaks, and arrange take-back or licensed collection for batteries, panels and electronic waste.			
SECTION 2: SOCIAL AND COMMUNITY HEALTH RISK SCREENING				
No.	**Screening Question**	**No**	**Yes**	**Remarks**
2.1	Land Acquisition: Will the proposed activity require land acquisition, transfer of assets, or voluntary land donation (VLD)?			
2.2	Local Economic Impacts: Could the proposed activity disrupt or result in the temporary or permanent loss of livelihoods among nearby community members?			

SECTION 1: ENVIRONMENTAL RISK SCREENING				
No.	**Screening Question**	**No**	**Yes**	**Remarks**
2.3	Indigenous Peoples / Customary Law Communities (MHA): Is the proposed activity located within an area occupied or used by Indigenous Peoples or MHA, or could it require a Free, Prior, and Informed Consent (FPIC) process?			
2.4	Vulnerable Groups: Are there barriers that could restrict access to project benefits or participation by women, older persons, persons with disabilities, or low-income households?			
2.5	Health and Safety (CHS/SEA/SH): Could the proposed activity give rise to occupational or community health and safety risks, or risks of sexual exploitation and abuse and sexual harassment (SEA/SH)?			
2.6	Labor and Working Conditions (LMP): Will the proposed activity engage local workers and therefore require a worker grievance mechanism?			
2.7	Cultural Heritage: Is the site at or near graves, sacred sites, places of worship, or cultural heritage that is officially listed or identified by the community? If "Yes", keep works away from them, consult the community and, where required, the cultural heritage authority, and apply the Chance Finds Procedure (ESMF Annex VIII).			
SECTION 3: ASSOCIATED FACILITIES				
No.	**Screening Question**	**No**	**Yes**	**Remarks**
3.1	**Associated Facility – identify:** Will the activity depend on a facility that SEHATI does not pay for, without which the activity cannot work, and that is being built, expanded or planned at about the same time because of this activity? Examples: an access road or bridge, a power line or grid connection, a water intake or pipeline, a quarry or borrow pit, a waste disposal site, a jetty or landing site, or a telecommunication tower or backhaul built by an operator. If "Yes", name and describe each facility and its location in the Remarks column.			
3.2	**Associated Facility – who is responsible:** For each facility named in 3.1, who will build, own and operate it (for example another village, a district or provincial office, a ministry or national program, PLN, a telecommunication			

SECTION 1: ENVIRONMENTAL RISK SCREENING				
No.	**Screening Question**	**No**	**Yes**	**Remarks**
	operator, a private company or a BUM Desa)? Is it existing, under construction or planned, and does it have its own environmental document or permits (AMDAL, UKL-UPL, SPPL, KKPR)?			
3.3	**Associated Facility – inform and follow advice:** If "Yes" at 3.1, KRISNA notifies the E&S focal point of the District Coordination Team, who advises the village with the relevant district technical office and refers the case to the CPMU E&S Specialists for determination before approval (ESMF Section 1.3; ESCP Action 1.5). Has the facility been reported, and is the advice received and the measures agreed recorded here? If the scope of the activity changes later, answer 3.1–3.3 again.			

Screening instructions: Select the applicable response, indicate the preliminary risk level where relevant, and provide supporting details and proposed mitigation measures in the Remarks column.

Environmental and Social Setting Form (Site Walk-over)

Purpose

This form records the existing environmental and social conditions at and around the proposed project location before any project activity starts. It gives the screening a picture of the initial condition of the location, so that the screening answers, the choice of ESCOPs and any further instruments are based on actual conditions. The form is not an approval document and does not decide whether a proposal is approved; approval follows the screening and verification steps in ESMF Section 1.3. The record is also used as the reference for field monitoring, complaint handling and restoration of the location.

Responsible Party

The village facilitator completes the form together with a village government representative, the Village Implementation Team (Tim Pelaksana Kegiatan, TPK) and the person who holds or uses the land. The form is completed during the field visit for the E&S Screening Form and Form BIO, Part BIO-2 (Annex V), before the proposal is submitted through KRISNA. The DCT checks the form during district verification (ESMF Section 1.3, Step 4).

Application

The form applies to every activity proposed from the SEHATI menu, including equipment installed at a fixed place such as mills, dryers, generators, pumps, cold storage units and waste compactors. It is not required for training, studies or mobile equipment without a fixed location. One form is completed for each proposed project location.

Method

Walk through the proposed project location and observe the area within about 500 m in each direction, and about 1 km upstream and 1 km downstream along the water bodies recorded in D2 and any water body that would receive wastewater or drainage. Observation is visual and does not use measuring instruments. Interview at least three local residents, including at least one woman and one long-time resident, and take photographs. Record all observation and interview results; where information is not available, write "not known" instead of estimating. Biodiversity features (protected areas, natural habitats, protected species) are recorded in Form BIO and are not repeated in this form.

Use of Results

Part N records the implications of the findings for the proposal. Where the form records signs of existing pollution or contamination, a pollution source or a sensitive place close to the proposed project location, or a history of flooding or landslides, the facilitator informs the PIU. The PIU decides with the DLH whether the location or design should change and whether measurements are needed before the project starts (Annex III, Part A). The completed form, photographs and sketch map are uploaded with the proposal in KRISNA and kept in the village office. The form is completed again if the proposed project location changes.

PART A: GENERAL INFORMATION		
No.	**Observation**	**Record (tick ☐ and describe)**
A1	Location	Province: ____ District: ____ Subdistrict: ____ Village: ____ Hamlet (dusun): ____
A2	Activity package	☐ Green Agroprocessing ☐ Aquaculture and Fisheries ☐ Green Ecotourism ☐ Food Security ☐ Livestock ☐ Tools and equipment
A3	Type of works	☐ new construction ☐ rehabilitation or extension of an existing facility ☐ equipment installed at a fixed place ☐ other: ____
A4	Coordinates and size of the proposed project location	GPS coordinates of the center: ____ Corner points, or start and end points: ____ Footprint area: ____ m², or length: ____ m
A5	Land status and current user	Land status: ☐ village treasury land ☐ voluntary land donation ☐ other: ____ (Land Access Procedure, Annex VI) Land holder: ____ Current user: ____
A6	Date, time and weather of the visit	Date: ____ Time: ____ Weather on the day: ☐ dry ☐ light rain ☐ heavy rain Weather in the past three days: ☐ dry ☐ rain Season: ☐ dry ☐ rainy ☐ transition
A7	Persons involved (name, position, telephone)	Village facilitator: ____ Village government: ____ Village Implementation Team (TPK): ____ Land holder or user: ____ Residents (at least one woman and one long-time resident): ____
A8	Other forms completed during the same visit	☐ E&S Screening Form (Sections 1 to 3 of this Annex) ☐ Form BIO, Part BIO-2 (Annex V) ☐ IPPF screening (Annex XI) ☐ land due diligence (Annex VI)

PART B: LAND USE AND SURROUNDINGS		
No.	**Observation**	**Record (tick ☐ and describe)**
B1	Land type at the proposed project location (tick all that apply; classes follow Form BIO, question C10)	**Modified land:** ☐ settlement or yard (pekarangan) ☐ sawah ☐ dryland farm (tegalan, ladang) ☐ plantation or tree crops (kebun) ☐ existing ponds (kolam, tambak) ☐ buildings, roads or other existing footprint **Other land:** ☐ scrub (semak belukar) ☐ grassland or savanna (padang rumput, alang-alang) ☐ fallow land with regrowth (bera) ☐ trees, remnant or disturbed forest ☐ bare or recently cleared land ☐ other: ____ **Natural or sensitive land:** ☐ natural forest ☐ mangrove ☐ peat or swamp ☐ wetland, lake shore or riverbank vegetation ☐ beach, coral or seagrass ☐ karst If natural or sensitive land is ticked, check the exclusion list in Form BIO, section 2B, before continuing.
B2	Land use within about 500 m of the proposed project location (state the direction)	☐ houses ____ ☐ sawah or farms ____ ☐ plantation ____ ☐ forest ____ ☐ river, lake or sea ____ ☐ industry or business ____ ☐ road ____ ☐ other ____
B3	Landform	☐ flat ☐ gentle slope ☐ steep slope (difficult to climb without using hands) ☐ hilltop or ridge ☐ foot of a slope ☐ valley floor or low hollow ☐ riverbank or floodplain ☐ coast or tidal area
B4	Surface soil and drainage (visual and touch observation)	Soil: ☐ sandy ☐ clay, sticky when wet ☐ loam ☐ black, soft and spongy (peat) ☐ rocky or limestone ☐ fill or rubble Drainage: ☐ dry ☐ wet or waterlogged after rain ☐ standing water at the time of the visit
B5	Existing structures and features at the proposed project location	☐ none ☐ buildings ☐ old foundations or rubble ☐ old roof or wall sheets that may contain asbestos ☐ wells ☐ graves ☐ trees to be cut, number: ____ ☐ power line ☐ other: ____
B6	Access to the proposed project location	☐ paved road ☐ earth road or track ☐ footpath only ☐ by boat New access required: ☐ No ☐ Yes, length ____ m (to be screened as part of the activity)
B7	Nearest sensitive receptors and their distance from the boundary of the proposed project location	Houses ____ m; school ____ m; health post (Posyandu, Puskesmas) ____ m; place of worship ____ m; market ____ m Drinking-water well or spring ____ m; water intake ____ m; fishponds ____ m; graves ____ m
B8	Other ongoing or planned projects or programs at or near the proposed project location (roads, irrigation, other village or government works, company operations)	☐ none known ☐ yes: ____ (report to the DCT for the cumulative impact check, ESMF Section 5.3)

PART C: EXISTING INDUSTRIES AND BUSINESSES WITHIN ABOUT 1 KM OF THE PROPOSED PROJECT LOCATION					
No.	**Type and name of the industry or business**	**Direction and distance from the proposed project location (m)**	**Effect reaching the proposed project location (observation and residents)**	**Emissions or discharges, and operating time**	**Known complaints or conflicts**
C1. Are there industries or businesses within about 1 km of the proposed project location? ☐ none ☐ yes: list each one below, starting with the nearest Type means the kind of industry or business, for example a rice mill, tofu or tempe maker, tapioca or palm sugar unit, palm oil mill, sawmill, brick or lime kiln, sand or stone quarry, mine, slaughterhouse, livestock or poultry farm, shrimp pond, fish processing unit, workshop, fuel station, landfill, market or factory. Effect reaching the proposed project location is judged from what is noticed at the location and what residents say, not from the wind direction, which changes with the season.					
1			Smoke, dust or odor noticed at the location: ☐ often ☐ sometimes ☐ never ☐ not known Wastewater enters the water body upstream of the location: ☐ yes ☐ no ☐ not known	☐ smoke ☐ dust ☐ odor ☐ noise ☐ vibration ☐ wastewater ☐ solid waste Time: ☐ day ☐ night ☐ day and night	
2			Smoke, dust or odor noticed at the location: ☐ often ☐ sometimes ☐ never ☐ not known Wastewater enters the water body upstream of the location: ☐ yes ☐ no ☐ not known	☐ smoke ☐ dust ☐ odor ☐ noise ☐ vibration ☐ wastewater ☐ solid waste Time: ☐ day ☐ night ☐ day and night	
3			Smoke, dust or odor noticed at the location: ☐ often ☐ sometimes ☐ never ☐ not known Wastewater enters the water body upstream of the location: ☐ yes ☐ no ☐ not known	☐ smoke ☐ dust ☐ odor ☐ noise ☐ vibration ☐ wastewater ☐ solid waste Time: ☐ day ☐ night ☐ day and night	

4			Smoke, dust or odor noticed at the location: ☐ often ☐ sometimes ☐ never ☐ not known Wastewater enters the water body upstream of the location: ☐ yes ☐ no ☐ not known	☐ smoke ☐ dust ☐ odor ☐ noise ☐ vibration ☐ wastewater ☐ solid waste Time: ☐ day ☐ night ☐ day and night	
5			Smoke, dust or odor noticed at the location: ☐ often ☐ sometimes ☐ never ☐ not known Wastewater enters the water body upstream of the location: ☐ yes ☐ no ☐ not known	☐ smoke ☐ dust ☐ odor ☐ noise ☐ vibration ☐ wastewater ☐ solid waste Time: ☐ day ☐ night ☐ day and night	

PART D: WATER		
No.	**Observation**	**Record (tick ☐ and describe)**
D1	Water source to be used by the activity	☐ none ☐ piped supply (PDAM, PAMSIMAS or village system) ☐ dug well ☐ borehole ☐ spring ☐ river or stream ☐ irrigation canal ☐ lake, pond or reservoir ☐ rainwater ☐ sea Distance from the proposed project location: ____ m
D2	Water bodies within about 500 m of the proposed project location (record up to two, nearest first; show any others on the sketch map in N3)	**Water body 1:** ☐ river or stream ☐ canal or drain ☐ lake or pond ☐ swamp or wetland ☐ sea or estuary Name (if any): ____; distance: ____ m; direction: ____; banks: ☐ stable ☐ eroding or collapsing **Water body 2:** ☐ river or stream ☐ canal or drain ☐ lake or pond ☐ swamp or wetland ☐ sea or estuary Name (if any): ____; distance: ____ m; direction: ____; banks: ☐ stable ☐ eroding or collapsing Condition of each: record in D8. If one of them also receives the wastewater or drainage, record it here and write "same as water body 1" or "same as water body 2" in D4.
D3	Activities within about 1 km upstream of the proposed project location along the water bodies in D2	☐ none seen ☐ houses discharging wastewater ☐ livestock pens ☐ fishponds ☐ industry or business (Part C, No. ____) ☐ sand or stone mining ☐ farmland with heavy fertilizer or pesticide use ☐ dump site ☐ other: ____

D4	Receiving point for wastewater or drainage from the activity	☐ no wastewater or drainage ☐ soakaway or infiltration (distance to the nearest well: ____ m) ☐ drain leading to ____ ☐ river or stream ☐ canal ☐ lake or pond ☐ sea Name (if any) and distance: ____ Existing discharges into it: ☐ houses ☐ livestock ☐ industry or business (Part C, No. ____) ☐ fishponds ☐ none seen Condition: record in D8
D5	Water uses within about 1 km downstream of the receiving point, and their distance	☐ drinking-water intake ____ m ☐ bathing or washing ____ m ☐ irrigation ____ m ☐ fishing or fishponds ____ m ☐ livestock watering ____ m ☐ mangrove, wetland or coral ____ m ☐ none seen
D6	Other users of the water source	☐ households for drinking ☐ bathing and washing ☐ irrigation ☐ fishponds ☐ livestock ☐ other villages ☐ industry or business: ____
D7	Groundwater and drainage at the proposed project location	☐ nearby wells run dry in the dry season ☐ water found less than 1 m below ground ☐ salty or brackish wells ☐ standing water or mosquito breeding ☐ blocked drains ☐ none of these Water level in nearby wells in the dry season: about ____ m below ground

D8: CONDITION OF THE WATER (VISUAL AND SMELL OBSERVATION)				
Indicator	**Water source (D1)**	**Water body 1 (D2)**	**Water body 2 (D2)**	**Receiving point (D4)**
Tick the condition observed in each column. Leave a column blank where there is no second water body, where there is no wastewater or drainage (D4), or where the receiving point is one of the water bodies in D2.				
Color	☐ clear ☐ slightly cloudy ☐ cloudy or brown ☐ green ☐ dark or grey	☐ clear ☐ slightly cloudy ☐ cloudy or brown ☐ green ☐ dark or grey	☐ clear ☐ slightly cloudy ☐ cloudy or brown ☐ green ☐ dark or grey	☐ clear ☐ slightly cloudy ☐ cloudy or brown ☐ green ☐ dark or grey
Odor	☐ none ☐ musty or earthy ☐ rotten or sewage ☐ chemical or oily	☐ none ☐ musty or earthy ☐ rotten or sewage ☐ chemical or oily	☐ none ☐ musty or earthy ☐ rotten or sewage ☐ chemical or oily	☐ none ☐ musty or earthy ☐ rotten or sewage ☐ chemical or oily
Seen in or on the water	☐ nothing ☐ floating waste ☐ foam ☐ oil film ☐ thick algae or weeds ☐ dead fish ☐ silt or mud	☐ nothing ☐ floating waste ☐ foam ☐ oil film ☐ thick algae or weeds ☐ dead fish ☐ silt or mud	☐ nothing ☐ floating waste ☐ foam ☐ oil film ☐ thick algae or weeds ☐ dead fish ☐ silt or mud	☐ nothing ☐ floating waste ☐ foam ☐ oil film ☐ thick algae or weeds ☐ dead fish ☐ silt or mud

Flow or amount of water through the year (according to users)	☐ flowing or enough all year ☐ less in the dry season ☐ dry in the dry season ☐ still water	☐ flowing or enough all year ☐ less in the dry season ☐ dry in the dry season ☐ still water	☐ flowing or enough all year ☐ less in the dry season ☐ dry in the dry season ☐ still water	☐ flowing or enough all year ☐ less in the dry season ☐ dry in the dry season ☐ still water
Problems reported by users	☐ none ☐ itchy skin ☐ diarrhea ☐ bad taste or smell ☐ salty ☐ muddy after rain ☐ other: ____	☐ none ☐ itchy skin ☐ diarrhea ☐ bad taste or smell ☐ salty ☐ muddy after rain ☐ other: ____	☐ none ☐ itchy skin ☐ diarrhea ☐ bad taste or smell ☐ salty ☐ muddy after rain ☐ other: ____	☐ none ☐ itchy skin ☐ diarrhea ☐ bad taste or smell ☐ salty ☐ muddy after rain ☐ other: ____

PART E: AIR AND ODOR		
No.	**Observation**	**Record (tick ☐ and describe)**
E1	Air condition at the proposed project location during the visit	☐ clean, no odor ☐ dusty ☐ smoky ☐ unpleasant odor
E2	Air condition throughout the year, according to residents	☐ generally clean ☐ dusty in the dry season ☐ haze from forest or land fires ☐ regular smoke or odor from a nearby source ☐ other: ____
E3	Sources of smoke, dust or odor nearby, with the name of each source	☐ none ☐ industry or business (Part C, No. ____) ☐ open burning of waste ☐ burning of fields or land ☐ traffic on an unpaved road ☐ brick or lime kiln ☐ livestock pens or manure ☐ dump site or landfill ☐ cooking with fuelwood ☐ other: ____ Name, direction and distance of each source: ____
E4	Usual wind direction by season, if known by residents (wind direction usually changes between the dry and rainy seasons)	Dry season: from ____; rainy season: from ____; ☐ not known Houses that could receive smoke or odor from the planned activity in either season: ☐ none ☐ yes, nearest ____ m
E5	Complaints about air quality or odor in the area	☐ none known ☐ yes: subject of the complaint ____; source complained about ____

PART F: NOISE AND VIBRATION		
No.	**Observation**	**Record (tick ☐ and describe)**
F1	Noise level at the proposed project location during the visit (quiet: normal village sounds; moderate: machine or traffic noise can be heard, but conversation is easy; noisy: the voice must be raised to be heard at a distance of 1 m)	☐ quiet ☐ moderate ☐ noisy

F2	Noise sources heard or reported, with the name of each source	☐ none ☐ traffic ☐ rice mill or other mill ☐ generator or pump ☐ sawmill or workshop ☐ quarry or stone crusher ☐ construction ☐ boat engines ☐ livestock ☐ market ☐ industry or business (Part C, No. ____) ☐ other: ____ Name of each source: ____ Time: ☐ day ☐ night ☐ day and night
F3	Vibration felt or reported (heavy trucks, quarry blasting, machinery)	☐ No ☐ Yes: ____
F4	Noise-sensitive areas within about 200 m, and their distance	Houses ____ m; school ____ m; health facility ____ m; place of worship ____ m

PART G: SOLID WASTE		
No.	**Observation**	**Record (tick ☐ and describe)**
G1	Current household waste handling near the proposed project location	☐ collected by the village or district service, ____ times a week ☐ taken to a TPS or TPS3R ☐ waste bank ☐ composted ☐ burned ☐ buried ☐ thrown into a river, drain, beach or open land
G2	Illegal dumping or unmanaged waste near the proposed project location	☐ No ☐ Yes: distance ____ m; size: ☐ a few bags ☐ up to a truckload ☐ larger Type: ☐ household ☐ plastics ☐ construction debris ☐ farm waste (pesticide containers, polybags) ☐ hazardous (batteries, used oil, lamps, medical waste)
G3	Waste at the proposed project location	☐ none ☐ litter ☐ old building materials or rubble ☐ suspected buried waste ☐ hazardous items: ____
G4	Nearest waste facilities and their distance	Final disposal site (TPA): ____ km; TPS or TPS3R: ____ km; waste bank: ____ km Collection service able to reach the proposed project location: ☐ Yes ☐ No
G5	Hazardous waste collection in the area (used oil, batteries, pesticide containers, veterinary waste)	☐ licensed B3 collector: ____ ☐ supplier take-back ☐ Puskeswan ☐ none known

PART H: SOIL CONTAMINATION		
No.	**Observation**	**Record (tick ☐ and describe)**
H1	Signs of soil contamination at or next to the proposed project location	☐ none seen ☐ oil or fuel stains ☐ dark or discolored soil ☐ chemical or fuel smell from the soil ☐ bare patches where plants have died ☐ empty chemical or pesticide containers ☐ ash or burnt waste ☐ mine tailings or unusual fill
H2	Previous land use of the proposed project location, according to the land holder and older residents	☐ farmland ☐ forest or scrub ☐ houses ☐ workshop, garage or fuel storage ☐ pesticide mixing or storage ☐ dump site ☐ mine or quarry ☐ industry ☐ not known Period: ____

H3	Follow-up where H1 shows signs of contamination or H2 shows a high-risk previous use	☐ not required ☐ PIU informed on ____; the PIU decides with the DLH whether soil or water testing is needed before works start and whether the proposed project location should be moved (Annex III, Part A)

PART I: NATURAL HAZARDS – SIGNS AT THE PROPOSED PROJECT LOCATION		
No.	**Observation**	**Record (tick ☐ and describe)**
I1	Erosion	☐ none ☐ rills or gullies ☐ exposed tree roots ☐ riverbank erosion ☐ coastal erosion (abrasi)
I2	Landslides and ground movement	☐ none ☐ old landslide scar ☐ cracks in the ground or in walls ☐ trees, poles or fences leaning downhill ☐ water seeping out of the slope ☐ fallen rocks
I3	Flooding	☐ none ☐ flood marks on walls or trees, about ____ cm high ☐ lines of debris or mud ☐ low ground that holds water after rain ☐ tidal flooding (rob) ☐ blocked drains or culverts
I4	Other signs	☐ none ☐ sinking ground (peat or karst) ☐ sinkholes ☐ burnt ground or fire scars ☐ volcanic ash ☐ other: ____
I5	Hazard zone according to hazard maps (InaRISK or BPBD), where available	The proposed project location is in a hazard zone for: ☐ flood ☐ landslide ☐ earthquake ☐ tsunami ☐ volcano ☐ forest or land fire ☐ drought ☐ none ☐ not checked

PART J: HISTORY OF NATURAL DISASTERS (INFORMATION FROM THE VILLAGE GOVERNMENT AND OLDER RESIDENTS)				
Hazard	**Occurred at or near the proposed project location?**	**Last occurrence (year)**	**Frequency**	**Severity (depth, area, damage, people affected)**
Flood	☐ No ☐ Yes			
Flash flood	☐ No ☐ Yes			
Landslide	☐ No ☐ Yes			
Erosion or riverbank collapse	☐ No ☐ Yes			
Coastal erosion or tidal flooding	☐ No ☐ Yes			
Drought or water shortage	☐ No ☐ Yes			
Forest or land fire, haze	☐ No ☐ Yes			
Strong wind or storm	☐ No ☐ Yes			
Earthquake or tsunami	☐ No ☐ Yes			

Volcanic eruption	☐ No ☐ Yes			
Other: ____	☐ No ☐ Yes			
Changes observed by residents, for example longer dry seasons or more frequent floods				

PART K: ENVIRONMENTAL ISSUES IN THE AREA		
No.	**Observation**	**Record (tick ☐ and describe)**
K1	Existing environmental issues around the proposed project location	☐ forest clearing or illegal logging ☐ sand or stone mining in rivers or on beaches ☐ river or sea pollution ☐ forest or peat fires and haze ☐ mangrove cutting ☐ coral or seagrass damage ☐ overfishing or destructive fishing ☐ water shortage ☐ heavy pesticide use ☐ livestock waste ☐ waste dumping ☐ wild animals entering fields or the village ☐ invasive plants or animals ☐ other: ____
K2	Source of information for each issue, and any action taken	

PART L: SOCIAL CONDITIONS AND EXISTING CONFLICTS		
No.	**Observation**	**Record (tick ☐ and describe)**
L1	Existing disputes or conflicts at or near the proposed project location	☐ none known ☐ among residents (land, boundaries, inheritance, water) ☐ between villages ☐ between residents and a nearby industry or business (pollution, noise, land, jobs) ☐ with a plantation, mining or forestry company ☐ over forest area or other state land ☐ between social, ethnic or religious groups ☐ other: ____
L2	Details of each conflict: parties, cause, start, status and how it is handled	Status: ☐ ongoing ☐ settled ☐ unresolved but not active Details: ____
L3	Potential for the activity to worsen an existing conflict, for example through the use of disputed land or water, or additional pollution near residents who already complain	☐ No ☐ Yes: ____ (apply the Social Conflict Analysis, Annex VII)
L4	Current users of the proposed project location who may lose access	☐ none ☐ farmers or tenants ☐ herders ☐ fishers ☐ vendors ☐ waste pickers ☐ collectors of forest or coastal products ☐ other: ____
L5	Vulnerable households adjacent to the proposed project location	☐ none ☐ poor households ☐ households headed by women ☐ older persons or persons with disabilities ☐ other: ____

PART M: MASYARAKAT ADAT AND CULTURAL HERITAGE		
No.	**Observation**	**Record (tick ☐ and describe)**
M1	Nearest Masyarakat Adat community or customary village (kampung adat)	Name: ____ Distance: ____ km Customary land (tanah ulayat) at the proposed project location: ☐ No ☐ Yes ☐ not known (apply the IPPF screening, Annex XI)
M2	Customary rules or sacred places affecting the proposed project location (sasi, restricted areas, sacred forest, ritual sites)	☐ none ☐ yes: ____
M3	Nearest cultural heritage and its distance	☐ registered cultural heritage (cagar budaya) ____ m ☐ graves or cemetery ____ m ☐ sacred site or place of worship ____ m ☐ traditional house or old structure ____ m ☐ reported archaeological finds ____ m (apply Annex VIII)

PART N: SUMMARY AND FOLLOW-UP		
No.	**Observation**	**Record (tick ☐ and describe)**
N1	Summary of existing conditions in three to five sentences: current conditions, features to be protected and existing pressures	
N2	Implications for the proposal (tick and state the action)	☐ no change needed ☐ move or adjust the proposed project location ☐ change the design (drainage, setback, treatment, noise control) ☐ add ESCOP: ____ ☐ Simple ESMP needed ☐ measurement before works (☐ water ☐ soil ☐ air ☐ noise), referred to the PIU and the DLH ☐ refer to the DCT (cumulative check, Associated Facility, conflict) ☐ steps under the LAP, the IPPF or Annex VIII
N3	Sketch map (draw or attach), showing the north arrow, boundary of the proposed project location, houses, roads, water source, all water bodies nearby and their flow direction, receiving point, industries, dump sites, hazard signs, cultural sites and approximate distances	

PHOTO LOG				
No.	**Photo (file name)**	**GPS coordinates**	**Direction**	**Subject**
At least four photographs taken from the center of the proposed project location facing north, east, south and west, plus the water source, the water bodies in D2, the receiving point and every issue recorded. Photographs taken for Form BIO, Part BIO-2 may be used for the same points.				
1				
2				
3				
4				
5				
6				

SIGN-OFF			
Role	**Name**	**Signature**	**Date**
Prepared by: village facilitator			
Village government representative			
Checked by: DCT E&S focal point (district verification)			
DCT remarks			

ANNEX III: Environmental and Social Codes of Practice (ESCOP)

Part A. Introduction

1. Purpose

This Environmental and Social Codes of Practice (ESCOP) sets out simple, standard measures to prevent and reduce the environmental, health and safety and social risks of small SEHATI subprojects. It is meant for subprojects that have passed the Exclusion List and the E&S Screening Form and are classified as low or moderate risk, where a site-specific ESMP is not required.

The ESCOP does not replace national environmental approval. Where a subproject requires UKL-UPL or SPPL under MoEF Regulation No. 4/2021, the ESCOP is applied together with that document. Subprojects of AMDAL scale are excluded from SEHATI.

Standards to meet. All works and facilities must meet the national environmental quality standards that apply to them, such as those for ambient air, noise, vibration, odor, engine and vehicle emissions, and wastewater. Each ESCOP names the standards that apply to its activities. Where the World Bank Group Environmental, Health and Safety (EHS) General Guidelines, or the EHS Guidelines for the relevant industry sector, set a stricter level or measure, the stricter one applies (ESS3; ESCP Action 3.7).

Village-scale activities meet the environmental quality standards for air, noise, water and wastewater by applying the ESCOP measures. Measurement is needed when: (i) people complain about dust, smoke, odor, noise, vibration or polluted water and soil; (ii) screening shows a relevant risk, for example where an engine, generator, dryer, stove, boiler or mill runs regularly close to houses, schools, health facilities or places of worship, or where wastewater is discharged near wells, springs or water body; or (iii) the UKL-UPL or SPPL requires it. The PIU can ask the DLH or an accredited laboratory to measure, and the implementer corrects the source (for example by moving or enclosing it, fitting a chimney or silencer, changing working hours or improving wastewater treatment) until the standard is met. Where screening shows such a risk, the monitoring arrangement (what is measured, where, how often and by whom) is written into the village-level E&S instrument and, for contracted works, into the contractor's requirements (ESCP Action 3.7). Results are kept with the subproject records and reported through the Field Monitoring Checklist (Part C).

Contamination and remediation. If Project activities contaminate soil, surface water or groundwater (for example through a spill or leak of fuel, oil, pesticide, chemicals or untreated wastewater), the party responsible must stop the source, contain the contamination, report it as an incident (ESCP Action E), investigate the cause, and restore the affected land and water, as required by Law No. 32/2009 (Article 54, restoration of environmental functions) and GR No. 22/2021. Small spills are cleaned up under ESCOP 1. Where contamination is extensive or involves B3 substances, the PIU informs the DLH and remediation follows MoEF Regulation No. P.101/2018 on Guidelines for the Remediation of Land Contaminated by Hazardous and Toxic (B3) Waste, including the approval and completion steps it sets. Remediation starts promptly and is completed within a timeframe agreed with the DLH and the World Bank (ESCP Action 3.8).

2. How to use the ESCOP

- During planning: the village facilitator and implementer select the relevant ESCOPs (ESCOP 1 applies to all physical works; ESCOPs 2–11 are added by package) and attach them to the subproject proposal and budget.
- Community-implemented works: the ESCOP is used as practical guidance for the village implementing team, community workers and BUM Desa, supported by training and field supervision.
- Contractor-implemented works and procurement: the relevant ESCOPs are included in the TOR, bill of quantities and contract as mandatory ESHS requirements.
- Monitoring: the facilitator uses the Field Monitoring Checklist (Part C) at least once during construction and once after the facility starts operating; findings are reported to the PIU and followed up.
- Measures are applied in proportion to the size of the activity: small household- or group-scale activities apply only the relevant basic measures; larger facilities apply the full ESCOP.
- Relationship to the biodiversity category: an activity screened as biodiversity Category A is managed through the ESCOPs that apply to it, with no separate document; Category B applies the same ESCOPs through a Simple ESMP; Category C requires a Biodiversity Management Plan in addition.
- The ESCOP is disclosed in Bahasa Indonesia at the village and explained to workers and community members before works start.

3. Responsibility codes

- IMP – Implementer: village implementing team, community group/cooperative, BUM Desa or contractor carrying out the works or operating the facility.
- FAC – Village/technical facilitator supporting and supervising the subproject.
- PIU – District PIU environmental and social staff (with CPIU/CPMU support where needed).
- DIN – Relevant local government technical office (e.g., agriculture, fisheries, livestock/veterinary, environment, tourism).

Note: responsibility codes are to be aligned with the institutional arrangements in the final SEHATI ESMF.

4. List of ESCOPs

ESCOP	Title	Applies to
ESCOP 1	General construction and small civil works	All packages
ESCOP 2	Village and farm roads, access paths and small drainage	Packages 1–5
ESCOP 3	Green agroprocessing facilities	Package 1; processing units and slaughterhouses under Packages 4 and 5

ESCOP	Title	Applies to
ESCOP 4	Off-grid solar power (PLTS) and batteries	Packages 1, 3, 4 and Component 1 (solar PV, solar dryers, solar water pumps); any subproject installing solar
ESCOP 5	Village waste management facilities (TPS3R / waste centers)	Packages 1, 2, 3, 4, 5 and Component 1 (waste compactors)
ESCOP 6	Aquaculture and fisheries	Package 2
ESCOP 7	Docks, piers and small coastal/riverbank works	Package 2; jetties and boat moorings under any package
ESCOP 8	Green ecotourism	Package 3
ESCOP 9	Food security: farming, irrigation, small reservoirs and post-harvest	Package 4
ESCOP 10	Livestock and biogas	Package 5; biodigesters under Package 1 and Component 1
ESCOP 11	Productive tools and equipment	Component 1 (tractors, boat engines, cold storage, solar pumps, compactors, digital equipment)

5. Which ESCOPs apply to my subproject

Find the package in the table below. The core ESCOPs always apply. The ESCOPs in the last column are added only when the subproject includes that type of work. ESCOP 1 applies to every physical work and ESCOP 11 to every purchase of tools or equipment.

Package	Core ESCOPs	Add when the subproject includes
Package 1 – Green agroprocessing	1, 3, 11	2 (access roads/drainage), 4 (solar PV, solar dryers), 5 (waste facility/composting), 7 (jetties, boat moorings), 10 (biodigesters)
Package 2 – Aquaculture and fisheries	1, 6, 11	2 (access roads/drainage), 4 (solar PV), 5 (waste facility), 7 (docks, piers, coastal works)
Package 3 – Green ecotourism	1, 8, 11	2 (access paths/trails, drainage), 4 (solar PV), 5 (waste facility/waste bank), 7 (jetties, boat moorings)
Package 4 – Food security	1, 9, 11	2 (farm roads/drainage), 3 (milling and processing units), 4 (solar water pumps, solar dryers), 5 (waste facility/composting), 7 (jetties, boat moorings)
Package 5 – Livestock	1, 10, 11	2 (farm roads/drainage), 3 (milk, egg or meat processing units, slaughterhouses), 4 (solar PV), 5 (manure/waste facility), 7 (jetties, boat moorings)
Component 1 **– Tools and equipment only (no construction)**	11	4 (solar PV, solar pumps), 5 (waste compactors), 10 (biogas digesters)

Appendix A (Pesticide Hazard Classification Guide) and Part C (Field Monitoring Checklists) follow the ESCOPs.

Part B. Environmental and Social Codes of Practice

ESCOP 1. General Construction and Small Civil Works

Applies to: All physical works under Packages 1–5 (buildings, facilities, roads, canals, ponds, piers).

Issue	Prevention / mitigation measures	Resp.
Site selection and eligibility	• Confirm the site passed the SEHATI Exclusion List and E&S Screening Form before any works. • Do not build in high disaster-risk locations where the risk cannot be reduced by site choice or design. In other flood, landslide or coastal erosion prone areas, adapt the design (raised floors, drainage, slope protection). • Do not build inside, or within 1 km of, a conservation area (KSA/KPA), a marine conservation area or protection forest, and not on peat, mangroves or wetlands or in critical habitat (SEHATI Exclusion List No. 4 and No. 15). Such sites are excluded and cannot be made eligible by mitigation. • Keep structures outside river buffer zones (MPWH Regulation No. 28/2015), except bridges, jetties, water infrastructure and pipelines that the regulation allows there, and away from drinking-water sources. • Confirm land status and land access agreement (per the SEHATI land access procedure / voluntary land donation) before work starts. • Confirm that the biodiversity screening required by the Biodiversity Screening Procedure (ESMF Annex V) is complete: Part BIO-2 for the activity, verified by the District Coordination Team on Part BIO-3, and Part BIO-4 where the activity was referred to the CPMU. • Where the place is known to flood, build the floor higher than the highest flood the village remembers, and keep switchboards, batteries and stored goods above that level. Put this in the drawing and the cost estimate. • Use village-owned or government land first; use private land only through the SEHATI land access procedure. • Where works use or affect customary land, resources or sacred sites of Masyarakat Adat, confirm that FPIC has been obtained and documented under the IPPF before works start.	IMP, FAC
Dust and air quality	• Water exposed soil and dirt roads in dry weather. • Cover sand, soil and cement stockpiles and loads during transport. • No burning of vegetation, debris or construction waste. • Keep dust and smoke at the nearest houses within the ambient air quality standard (GR No. 22/2021, Appendix VII); if neighbors complain about dust or smoke, the PIU arranges measurement and the works are adjusted until the standard is met.	IMP
Noise and vibration	• Work during daytime only; agree working hours with the village, avoiding prayer times, school hours and community events. • Switch off idle engines and maintain equipment; generators and other engines meet the engine emission standard (MoEF Regulation No. 11/2021). • Keep noise at the nearest houses within 55 dB(A) (MoE Decree No. 48/1996) and, where stricter, within the EHS General Guidelines limits of 55 dB(A) by day and 45 dB(A) at night, or no more than 3 dB(A) above the existing background level; use well-maintained, silenced equipment. • Keep vibration from compactors and heavy machinery at nearby buildings within the vibration standard (MoE Decree No. 49/1996).	IMP

Issue	Prevention / mitigation measures	Resp.
Soil erosion and drainage	• Clear only the area needed; keep vegetation near streams and on slopes. • Avoid earthworks during heavy rain; stabilize slopes with terracing, mulch, stones or grass. • Provide temporary drains and sediment traps; keep existing drains free of soil and debris. • Replace topsoil and re-vegetate disturbed areas as soon as works finish. • Re-vegetate disturbed areas with local native plants; do not plant invasive or non-native species. • Give new buildings permanent drainage: slope the ground away from the walls and lead roof and yard water to a stable outlet so that water does not pond around the foundation.	IMP
Water quality and availability	• Do not throw soil, cement washing, waste, oil or chemicals into rivers, canals, ponds or the sea. • Do not block or divert natural water flows that others depend on. • Wash tools and mixers away from water bodies. • Do not take groundwater, spring or river water in amounts that reduce water for neighboring wells or downstream users. • Before drilling a well, ask residents whether nearby wells or springs dry up in the dry season and check the dry-season yield. Do not drill where they already dry up, and do not take more water than the source can supply in the dry season. • Check water levels in nearby wells in the dry season; if they fall, reduce pumping or switch to another source. • Before drilling a well or taking groundwater, spring or river water, obtain the approval or license where required: for groundwater, as set out in E&S Screening Form item 1.3; for river, lake or spring water, from the river basin authority (BWS/BBWS) or the PU SDA office (MPWH Regulation No. 2/2024). • Before building a water supply or intake, list the users upstream and downstream and agree written water-sharing rules with them, including women and poorer households; always leave enough flow downstream for other users and for fish and other aquatic life. • Protect each drinking-water source: mark and fence a protection zone around the well, spring or intake and keep toilets, septic tanks, animal pens, waste, fuel and chemicals out of it; seal wells with a concrete apron, sealed casing and cover. • Test pipelines and tanks for leaks before backfilling and first use; fit a water meter where use must be checked against an agreed amount. • Have drinking water tested against the drinking-water standard, and water for bathing and washing against the hygiene and sanitation water standard (MoH Regulation No. 2/2023), before first use and at regular intervals, for example by the Puskesmas sanitarian; if a test fails, warn users and fix the source before use continues.	IMP
Solid and construction waste	• Provide bins; separate recyclable, general and hazardous waste. • Reuse or sell recyclable materials (timber, steel, packaging). • Send remaining waste to the district landfill (TPA) through the village or district collection service or, where there is none, only to a site agreed with the village/FAC and DLH; no dumping in natural habitats, drains or water bodies. • Collect used polybags, greenhouse film, shade nets, insect screens and seedling trays for reuse or recycling (waste bank/TPS3R); do not burn, bury or leave them in the field.	IMP

Issue	Prevention / mitigation measures	Resp.
	• Manage waste in line with Law No. 18/2008 and GR No. 81/2012: reduce and reuse first, then recycle, and dispose of only what is left. Construction debris and household waste containing hazardous substances (batteries, lamps, chemical containers) are specific waste under GR No. 27/2020: keep them apart and hand them to the district collection service or a licensed collector.	
Fuels, oils and hazardous materials	• Store fuel, oil, paint and chemicals in labeled, closed containers on a hard surface with drip trays, away from houses and water bodies. • Refuel on a hard surface away from drains and water; keep a spill kit (sand, absorbent, sacks). • Collect used oil, oily rags, filters, batteries, lamps, e-waste and empty chemical or pesticide containers separately in closed, labeled containers under cover, and return them to the supplier or hand them to a licensed B3 waste collector (GR No. 22/2021), or to a collection point agreed with the district environment office (DLH). • After a spill, dig out the soiled earth at once and replace it with clean fill. Put the soiled earth in a closed, labeled drum or sack, on a hard surface under cover, and ask the PIU or the district environment office (DLH) where to take it. Write down how much was removed and where it went. • Do not use asbestos materials such as asbestos-cement roof sheets, pipes or boards (SEHATI Exclusion List No. 12). Use zinc or galvalume sheets, clay or concrete tiles, or non-asbestos fiber cement instead. • Leave existing asbestos in place if it is intact. If it must be removed, wet it first, take down whole sheets without breaking or cutting them, have workers wear dust masks and gloves, and keep other people away. Wrap the sheets and hand them to a licensed B3 waste collector. Do not bury, burn or reuse them. • Place drip trays under parked machinery, generators and pumps, and refuel over a drip tray. • Keep the safety data sheet (SDS) with each chemical or test reagent; collect used reagents in a closed, labeled container for a licensed B3 waste collector; never pour them into drains, ponds or soil. • Where a building also holds food, feed or products, keep chemicals, pesticides and fuel in a separate, closed section, never beside food. • If a spill or leak reaches soil, a water body or a well: stop the source, contain and collect the spill, put contaminated soil and absorbents in closed, labeled containers for a licensed B3 waste collector, warn people who use the affected water, and report it to the PIU the same day as an incident, so that the CPMU can notify the World Bank where required (ESCP Action E). Where contamination is extensive or involves B3 substances, the PIU informs the DLH and the site is remediated under MoEF Regulation No. P.101/2018 (Part A, section 1).	IMP
Vegetation and wildlife	• Do not cut trees unless agreed in the subproject plan; mark and protect trees to be kept. • No hunting, trapping, poisoning or trading of wildlife by workers, especially protected species and species listed as threatened (IUCN VU/EN/CR). • No use of herbicides for site clearing. • Wildlife chance finds: if a nest, burrow, roost, turtle nest, or a live or dead protected animal is found, stop work in the immediate area, do not touch or move the animal, protect the spot, and inform the facilitator the same day. The facilitator contacts BKSDA or the relevant authority. Work restarts only on their instruction (ESMF Annex V, Appendix E).	IMP

Issue	Prevention / mitigation measures	Resp.
Construction materials	• Use timber, sand, gravel and stone only from legal sources; keep receipts. • Buy sand, gravel, stone and fill from established local building material suppliers; do not take them from unlicensed quarries or directly from riverbeds, beaches or mangroves (SEHATI Exclusion List No. 17); never take coral or seagrass; no coastal or river reclamation. • Where a small village borrow area is permitted and agreed with the community, leave it in a safe, stable condition and backfill pits to avoid standing water and drowning risk. • Timber felled during the works is limited to trees identified and approved in advance. Felled timber is not sold, traded or removed for commercial use, and clearance is never widened to recover timber. • For purchased timber, keep SVLK certification or equivalent documentation of legal origin. Timber of unknown origin, and protected or CITES-listed species, must not be accepted.	IMP, FAC
Occupational health and safety (OHS)	• Hold a short safety briefing before work starts and daily toolbox talks. • Provide and require PPE suited to the task (helmet, boots, gloves, masks, eye protection, life jackets for work over water). • Keep a first-aid kit on site; know the route to the nearest health facility; record and report all accidents. • Provide drinking water, shade, toilets and handwashing facilities for workers. • Use safe scaffolding, ladders and trench supports; only trained people operate machinery and electrical tools (Law No. 1/1970). • In hot weather and hot workplaces (e.g., greenhouses), open vents, do heavy work in the cooler hours and give rest breaks in shade with drinking water. • Reduce manual handling: keep loads manageable, provide trolleys, ramps or two-person lifts, train workers in safe lifting and keep floors dry and non-slip. • Never enter a tank, septic tank, digester, manhole or pit unless it has been emptied and ventilated, the worker is trained and a second person stays outside. • When anyone works in or over water, a second person watches from the bank with a life ring and rope; no one works in the water alone. • At remote or forest sites, agree before work starts how to call for help and how an injured worker will be taken to the nearest health facility.	IMP, FAC
Community health and safety	• Fence or rope off the work area, open trenches and stockpiles; put up warning signs; keep children out. • Control vehicle speed in the village; avoid material transport during school start/finish times. • Cover or fill holes and pits at the end of each day. • Inform residents in advance about work that disrupts roads, water or electricity. • Before work starts, brief residents and the nearest school on site dangers and on where fuel and chemicals are kept; warn neighbors before any spraying or fumigation. • Before closing a road, path or crossing, agree a safe temporary route with residents and keep it usable until the way reopens. • Do not leave standing water on site: cover water tanks and drain or fill pits and puddles so that mosquitoes cannot breed.	IMP
Emergency preparedness	• This applies to facilities that operate processing, drying, biogas, cold storage, waste centers, and any site that stores fuel or chemicals. It does not apply to small works such as paths, drains or repairs. For those facilities,	IMP

Issue	Prevention / mitigation measures	Resp.
	write a one-page plan: who to call (village head, health post, fire service, police), the way out, and where people gather. • Cover fire, fuel or chemical spills, electrical accidents, biogas leaks where a digester is installed, and flooding. • Post the plan where workers and operators can see it; brief everyone on site and repeat the briefing whenever new workers arrive. • For work on the coast or in flood-prone areas, check BMKG weather and tide warnings daily, stop work in storms and high tides, and tell workers where to go. • Apply the emergency plan to warehouses and stores: a fire extinguisher at each exit, smoke detectors, marked and clear exits, and no smoking or open flames inside.	
Labor and working conditions	• No child labor: no workers under 18 on hazardous work and no workers under 15 at all; check age before hiring (Law No. 13/2003). • No forced labor; agreed wages paid on time and in full; equal pay for women and men. • All workers sign and are briefed on the Code of Conduct (including prevention of SEA/SH). • Workers know how to use the workers' grievance mechanism. • Pay at least the regional minimum wage (UMK/UMP), or the rate set in the LMP for community workers and give every paid worker a written contract or work agreement before work starts. • Hire without discrimination, work toward the gender target in the LMP and include a non-discrimination clause in worker and contractor contracts. • Keep community labor (gotong royong) voluntary: record each contributor's agreement and time, stay within the limits in the LMP, and never make access to benefits depend on contributing.	IMP, FAC
Community relations and grievances	• Put up a noticeboard with subproject information and FGRM contact details (SIPEMANDU, facilitator, village office). • Consult the community, including women, the elderly, people with disabilities and Masyarakat Adat, on schedule and site arrangements. • Record complaints and follow up through the SEHATI FGRM. • List all complaint channels on the notice board (village, district, SIPEMANDU and SP4N-LAPOR!) and a confidential way to report SEA/SH. • Give information in the local language where needed, and in pictures or spoken form for people who cannot read. • For shared buildings and facilities, set up a management committee that includes women and all user groups, and post the rules and fees for use.	IMP, FAC
Cultural heritage and chance finds	• Do not disturb graves, sacred sites or places of worship. • If objects, bones or old structures are found, stop work and follow the Chance Find Procedure (ESMF Annex VIII). • Before siting, walk the site with village elders or customary leaders to identify graves, sacred trees and other heritage; keep works, stockpiles and access routes outside a buffer around them agreed with the village and customary leaders.	IMP, FAC
Site closure and restoration	• Remove all waste, materials and temporary structures. • Restore drainage and re-vegetate cleared areas. • Hand over the facility with a simple operation and maintenance (O&M) guide. • For warehouses and stores: build pest-proof floors, walls and doors with screened vents; keep the store clean, use stock first-in-first-out, agree who	IMP, FAC

Issue	Prevention / mitigation measures	Resp.
	holds the keys, keep a stock book, and enter the building in the village asset register and maintenance plan.	

ESCOP 2. Village and Farm Roads, Access Paths and Small Drainage

Applies to: Village and farm roads and access paths to production sites, tourist sites and facilities under Packages 1–5.

Issue	Prevention / mitigation measures	Resp.
Alignment and siting	• Follow existing tracks where possible; avoid natural forest, mangroves, peat, wetlands, steep and unstable slopes. • Do not open new roads or path access into natural forest, a conservation area or previously inaccessible natural habitat (SEHATI Exclusion List No. 4 and No. 15; Biodiversity Exclusion List X13, ESMF Annex V); avoid alignments that encourage illegal logging or land clearing. • Minimize the number of stream crossings; cross at stable, narrow points. • Keep walking trails narrow and lay them along the contour with gentle grades; do not run them straight up or down a slope.	IMP, FAC
Erosion and slope stability	• Build side drains, cross drains/water bars and outlets that release water onto stable ground. • Protect cut and fill slopes with grass, terracing, stone pitching or gabions. • Avoid earthworks in heavy rain; compact fill in layers.	IMP
Culverts and stream crossings	• Size culverts for flood flows; place stones at outlets to prevent scour. • Work in streams during low-flow periods; avoid fish spawning periods where known. • Keep culvert inlets clear of debris after construction. • Make culverts at least as wide as the existing channel and set the culvert floor at stream-bed level so that water and fish can pass; leave no drop at the outlet. • Where a road crosses an irrigation channel or farm drain, put in a culvert; do not fill or block the channel. • Design bridge spans to pass flood flows; keep abutments out of the channel, do not narrow the stream, and leave headroom for boats where boats use the river. • Separate in-stream work from flowing water with silt screens, sandbag bunds or small cofferdams; use hand tools or small machines in the stream bed; remove bunds and trapped silt afterwards. • Before in-stream work, tell downstream drinking-water users the work dates and agree how to protect or temporarily replace their supply. • Stabilize disturbed riverbanks with planting, live stakes, coir rolls or stone pitching.	IMP
Road safety	• Install signs at bends, bridges and steep sections; provide speed humps near schools where agreed. • Keep sight lines clear of vegetation. • Where a road stays open during work, post warning signs and a speed limit at both ends of the work zone and use flag-persons. • Fit bridges with railings on both sides and make decks wide enough for motorbikes, pedestrians and wheelchair users. • On tourist access roads, post speed limits in residential areas and wildlife-crossing signs where animals cross.	IMP, DIN
Maintenance	• Agree a village maintenance plan and budget (drain cleaning, pothole repair). • Inspect after heavy rain and repair drainage and erosion damage promptly. • Gravel or pave dusty sections near houses and stalls.	IMP

ESCOP 3. Green Agroprocessing Facilities

Applies to: Production facilities, galleries/showrooms and processing of agricultural, fisheries and livestock products (Package 1), and processing units and slaughterhouses under Packages 4 and 5.

Issue	Prevention / mitigation measures	Resp.
Siting and layout	• Locate at a safe distance from wells, rivers and houses; not in flood-prone areas. • Separate raw material, processing, storage and waste areas; provide good ventilation and lighting. • Give buildings open to the public (galleries, kiosks) step-free access with a ramp and a wide entrance.	IMP, FAC
Air quality and odor	• Do dusty work such as milling, sieving and grinding in a closed or well-ventilated room, away from where people eat, rest or pack. Sweep and damp down the floor at the end of each run and give the workers masks. • Fit fuel- or biomass-fired dryers and stoves with a chimney discharging above the roof line and away from houses; keep them maintained so they burn cleanly, and prefer solar dryer domes where they work. • Store and handle strong-smelling materials in covered, ventilated areas; agree measures with neighbors if odor reaches them. • Fit mills, grinders and shredders with dust covers or a simple dust collector; give workers N95/P2 dust masks, not cloth masks. • Tell nearby households in advance about desludging or maintenance that may increase odor or noise. • Engines and generators meet the engine emission standard (MoEF Regulation No. 11/2021). At the nearest houses, smoke and dust from boilers, dryers, stoves and mills stay within the ambient air quality standard (GR No. 22/2021, Appendix VII), noise stays within 55 dB(A) (MoE Decree No. 48/1996) or the stricter EHS limit in ESCOP 1, and odor stays within the odor standard (MoE Decree No. 50/1996).	IMP
Process wastewater	• Separate solids with screens and grease/solid traps before wastewater leaves the facility. • Treat wastewater (settling tank, septic tank with soakaway, biofilter or constructed wetland) before discharge; no direct discharge to rivers, canals or wells. • Treat wastewater so that any discharge meets the applicable standard (MoE Regulation No. 5/2014 as amended; MoE/BPLH Regulation No. 11/2025 for domestic wastewater); where the facility has UKL-UPL/SPPL, follow the limits set in that document. • Use the sector standard that matches the product: MoE Regulation No. 5/2014 as amended, Appendix V (tapioca), Appendix VIII (milk processing), Appendix XIII (fruit and vegetable processing), Appendix XIV (fish processing), Appendix XVI (coconut processing), Appendix XVIII (soybean products such as tofu, tempe and soy sauce) or Appendix XLV (slaughterhouses); MoE/BPLH Regulation No. 2/2026 (livestock and aquaculture feed); and Appendix XLVII of MoE Regulation No. 5/2014 for products with no sector standard. • Keep roof and yard rainwater out of the process drain; collect it separately so the treatment unit is not overloaded when it rains. • Size the treatment unit to the daily wastewater volume, line tanks and ponds, and build and test it before production starts. • Operate the unit: clean screens and grease traps regularly, remove sludge on a set schedule and dry or compost it; never dump sludge into drains, water bodies or fields.	IMP

Issue	Prevention / mitigation measures	Resp.
	• Connect toilets and washrooms to a septic tank built to SNI 2398:2017, at least 10 m from any well, with a soakaway or biofilter; empty the sludge regularly. • Where wastewater goes to a soakaway near wells, test the nearest wells regularly against the drinking-water standard (MoH Regulation No. 2/2023) and act at once if a well is affected. • In slaughtering, collect blood separately and keep it out of the wastewater; use impermeable floors that drain to the treatment unit. • Cover or fence open tanks and ponds and keep children and the public away.	
Organic residues and by-products	• Apply the waste hierarchy: reduce losses, reuse residues as animal feed, compost, biogas feedstock or other products. • Store residues in covered containers and remove daily to prevent odor, flies and rats. • Do not burn residues (husks, bran, peels, shells) in the open or dump them; burn them only as fuel in a dryer or stove with a chimney. • Where a biodigester is built, apply ESCOP 10 (Biogas digesters). • Compost feathers, offal and blood under cover, or bury them in a pit at least 60 m from wells and springs and 30 m from surface water, houses and property boundaries, covered by at least 1 m of soil (FAO Carcass Management Guidelines); never dump them.	IMP
Water and energy efficiency	• Use water-saving practices (dry cleaning before washing, reuse of rinse water where hygienic). • Choose energy-efficient equipment and dryers; prioritize solar dryer domes; use solar or biomass residues where feasible.	IMP
Chemicals and packaging	• Use only food-grade additives and approved cleaning agents; store them labeled and away from food. • Collect empty chemical containers separately; do not reuse them for food or water. • Reduce single-use plastic packaging; separate packaging waste for recycling. • Use food-grade packaging and food-safe printing inks. • Keep the safety data sheet (SDS) for every chemical, reagent and cleaning agent; hand used reagents and chemical residues in closed, labeled containers to a licensed B3 waste collector. • Provide separate bins, including for visitors; send packaging waste and other recyclables to the TPS3R or waste bank.	IMP
Worker health and safety	• Guard moving parts of machines; train operators; switch off and unplug machines before cleaning. • Provide PPE (heat-resistant gloves, aprons, masks, ear protection near noisy machines). • Keep floors dry and non-slip; provide handwashing and first-aid facilities. • Fit cutting, peeling, milling and drying machines with an emergency stop within the operator's reach, and guard or insulate hot surfaces. • For repetitive work, set tables at a comfortable height, provide seats, rotate tasks and allow short breaks; use trolleys for heavy sacks and crates. • Workers who clean tanks or handle sludges wear waterproof gloves, boots, eye protection and coveralls. • In slaughter and meat processing, provide cut-resistant gloves, face shields, waterproof aprons and non-slip boots, eye-wash points, first-aid kits, changing rooms and showers.	IMP

Issue	Prevention / mitigation measures	Resp.
Fire and electrical safety	• Install proper wiring, circuit breakers and earthing; no overloaded sockets. • Keep fire extinguishers or sand buckets near dryers, stoves and fuel storage; keep exits clear. • No smoking or open flames in stores of packaging, biomass or other combustible materials; post no-smoking signs. • Inspect wiring, breakers and earthing regularly and record the checks. • Fit spark arresters on biomass dryer and stove chimneys; do hot work (welding, cutting) only in a cleared area with a fire extinguisher at hand.	IMP
Food safety and hygiene	• Follow basic hygiene practices and obtain the relevant product registration (e.g., PIRT/halal) where required. • Store raw materials and products off the floor in a dry, pest-proof store and use stock first-in-first-out. • Test process and wash water against the drinking-water standard (MoH Regulation No. 2/2023) before first use and periodically. • Train processing workers in good manufacturing practice (GMP) and food hygiene; for milk, meat and eggs, follow the veterinary public health rules and arrange regular inspection and product testing with the livestock or health office.	IMP, DIN

ESCOP 4. Off-grid Solar Power (PLTS) and Batteries

Applies to: Solar panels, inverters and battery systems, solar dryers and solar water pumps. Named in the contents of Packages 1, 3 and 4, and procured as Component 1 equipment for any of the five packages. Apply this code to any subproject that installs solar equipment.

Issue	Prevention / mitigation measures	Resp.
Equipment quality	• Use certified panels, inverters, charge controllers and batteries with warranty and local after-sales service. • Size the system to actual needs to avoid excess batteries.	IMP, PIU
Installation and electrical safety	• Installation by a competent/certified installer following the requirements of MoEMR Regulation No. 11/2021 (reporting and SLO as applicable). • Use proper cabling, conduits, fuses/breakers and earthing; protect connections from rain. • Mount panels securely on strong roofs or steel/concrete foundations able to withstand strong winds. • Put panels on roofs where possible; ground-mounted panels go on land already cleared, with grass kept underneath. • Orient panels so that glare does not fall on houses or roads. • Install lightning and surge protection for panels, inverters and batteries. • Install to the Indonesian electrical installation code (PUIL) and record a safety check of wiring, fuses and earthing before switching on, even where no SLO is required. • Check that the roof can carry the panels before installing them.	IMP
Battery storage	• Place batteries in a ventilated, dry, shaded and locked room or box, away from children and flammable materials. • Keep a fire extinguisher suitable for electrical fires nearby, with a sand bucket as backup; post warning signs.	IMP
Operation and maintenance	• Train at least two local operators (including women where possible) on safe operation, cleaning and basic troubleshooting. • Keep a simple O&M logbook; clean panels with water only (no detergents into drains). • Set up an inclusive energy committee with women members; agree and post which households and facilities receive power and on what terms.	IMP, FAC
End-of-life panels and batteries	• Never dump, burn or open batteries; do not remove battery acid. • Store used batteries upright in a covered area on a hard surface and return them to the supplier (take-back) or a licensed B3 waste collector. • Include take-back obligations for batteries and panels in the procurement contract. • Keep a handover note for every used battery or panel returned to the supplier or handed to a licensed B3 waste collector.	IMP, PIU
Solar water pumps	• Size the pump to the safe yield of the well, spring or river; do not pump more than the source can recharge. • Agree water-sharing rules with other users; stop or reduce pumping if neighboring wells drop or dry up. • Before pumping from a well, obtain the approval or license where required (E&S Screening Form item 1.3).	IMP, FAC
Community safety	• Fence ground-mounted systems; keep children away from panels, cables and battery rooms.	IMP

ESCOP 5. Village Waste Management Facilities (TPS3R / Waste Centers)

Applies to: Small-scale waste management facilities for agroprocessing, green tourism, food security, aquaculture/fisheries and livestock (Packages 1, 2, 3, 4, and 5), including composting, waste banks and waste compactors (Component 1). Two types are distinguished. Type A – processing site: composting, a waste center (TPS 3R), a compactor, or any site where organic waste is processed or held for more than one day. Type B – collection point: a waste bank, sorting shed or bin shelter that holds dry, sorted waste only, is emptied on a fixed schedule and does no processing. Each measure below names the type it binds; where no type is named it binds both. Facilities follow Law No. 18/2008 and GR No. 81/2012 on household waste; waste banks also follow MoEF Regulation No. 14/2021, and hazardous household waste is handled as specific waste under GR No. 27/2020.

Issue	Prevention / mitigation measures	Resp.
Siting	• Type A: locate at least 50 m from the nearest house and downwind of it; further where odor or flies still reach houses, or where the UKL-UPL/SPPL or the agreement with the village requires more. • Type B: no setback distance applies. Place it on a hard, drained, roofed spot, at least 10 m from any well, and agree the spot with the nearest households. • Both types: keep clear of wells, rivers and flood-prone land. Consult neighbors on the location, access and operating hours before construction.	IMP, FAC
Design	• Type A: use an impermeable, roofed floor for sorting and storage to keep rain out. Provide drainage and a leachate collection tank; do not let leachate flow into drains, rivers or soil. Provide fencing, a lockable gate, washing facilities and a separate area for hazardous household waste. • Type B: provide a roof, closed containers and a floor that can be swept and washed. A leachate tank is not required where no organic waste is held overnight. Keep one labeled box for hazardous household waste (batteries, lamps, containers).	IMP, PIU
Odor, flies and pests	• Type A: separate waste at source; process or remove organic waste frequently; cover compost piles; keep the site clean and drains free of stagnant water; use screens and traps; avoid routine insecticide spraying. • Type B: empty containers at least twice a week and keep them closed; wash them when emptied. • Type A: turn compost piles regularly and check that they heat up (about 55 °C) for several days to kill pathogens. • Type A: odor at the nearest houses stays within the odor standard (MoE Decree No. 50/1996).	IMP
Leachate and water pollution (Type A)	• Reuse leachate in composting where suitable or treat it before discharge. • Check nearby wells for changes in smell or color and act on complaints.	IMP, FAC
Fire and gas	• No open burning of waste. • Store combustible waste away from ignition sources; ventilate storage; keep fire extinguishers or water available. • Send residual waste that cannot be composted or recycled to the district landfill (TPA) on a regular schedule.	IMP

Issue	Prevention / mitigation measures	Resp.
Hazardous waste	• Identify and segregate hazardous waste on arrival; keep it in a labeled, covered store with secondary containment, away from food, feed and water. • Collect batteries, lamps, used oil, pesticide and chemical containers separately and hand them to a licensed B3 collector or a take-back scheme; keep the records. • Keep a spill kit; clean up spills at once and never wash residues into drains or water bodies. • Provide PPE and train the workers who handle these items. • Tell households which items to keep apart (batteries, lamps, medicines, chemical containers) and how to bring them to the facility.	IMP
Waste compactors (Component 1)	• Operate compactors on a hard, drained surface with leachate collection; operate during daytime and keep noise at the nearest houses within 55 dB(A) (MoE Decree No. 48/1996) or the stricter EHS limit in ESCOP 1. • Only trained operators; keep hands out of moving parts; switch off before cleaning.	IMP
Worker health and safety	• Provide gloves, boots, masks and aprons; provide washing facilities; encourage tetanus vaccination. • Train workers on safe handling of sharp and hazardous items. • Offer workers hepatitis B vaccination as well as tetanus; give high-visibility vests to workers who work near roads.	IMP
Social aspects	• Type A: identify informal waste pickers and involve them in the facility (work opportunities, fair prices); agree operating rules and fees transparently with the community and manage complaints through the FGRM; secure a village commitment (budget and staff) for long-term operation. • Type B: agree operating rules, collection days and any fees with the households that use it; handle complaints through the FGRM. • For waste banks, post a fair price list and revenue-sharing rules; make sure women and youth can join and share in the income.	IMP, FAC

ESCOP 6. Aquaculture and Fisheries

Applies to: Fish/shrimp ponds, cages, hatcheries, fish handling and processing, fishing support (Package 2).

Issue	Prevention / mitigation measures	Resp.
Site selection	• No conversion of mangroves, peat, wetlands or other natural habitats into ponds (SEHATI Exclusion List No. 15). • Prioritize existing, idle or abandoned ponds; rehabilitate rather than open new ones. • Keep a vegetated buffer (e.g., mangrove green belt) between ponds and the coast or river. • Check water availability and conflicts with other water users (fishers, farmers, households). • Do not place cages in, or within 1 km of, a conservation area, a marine conservation area or protection forest (SEHATI Exclusion List No. 4). • Build hatcheries and shore facilities on land that is already cleared. • Before placing cages or a landing site, map fishing grounds, boat routes and moorings with local fishers and customary leaders, agree on the location in a village meeting, and keep traditional fishing grounds open. • Keep a buffer between brackish-water or shrimp ponds and freshwater farmland; do not release salty water onto rice fields or into irrigation canals. • Where water is taken from a river, spring or well used by others, obtain water-use approval where required (ESCOP 1), agree sharing rules with the other users and leave enough flow downstream.	IMP, FAC
Pond and cage construction	• Apply ESCOP 1; compact and protect embankments against erosion. • Separate inlet and outlet channels; install screens on inlets and outlets. • Place cages where water exchange is good and away from coral, seagrass and navigation routes. • Place cages only in the zone and within the number of cages set by the fisheries or environment office; keep the advised spacing between cages and from the shore; clean nets regularly and do not anchor in seagrass or aquatic plant beds. • Line tanks and channels where the soil leaks, give tanks overflow outlets onto stable ground, and repair leaks promptly.	IMP
Species and seed	• Culture native species or species already established and approved by KKP; no species prohibited under MMAF Regulation No. 19/2020. • Non-native species only with a risk assessment, escape-prevention measures, and approval from the competent authority (SEHATI Exclusion List No. 6). • Use certified, disease-free seed from registered hatcheries. • No wild-caught seed or broodstock of protected species. For species listed as VU/EN/CR on the IUCN Red List or in CITES Appendix II, use only hatchery-bred or legally sourced stock with the required permits/quotas and consult the fisheries office (DKP/BPSPL) (E&S Screening Form item 1.8).	IMP, DIN
Feed and water quality	• Follow good aquaculture practice (CBIB): appropriate stocking density, feeding by demand, and records of feed use. • Monitor basic water quality (color, smell, dissolved oxygen where possible). • Use settling ponds for pond drainage and sludge before discharge; reuse sludge as fertilizer where safe. • Keep a pond water plan: change part of the water on a set schedule, pass all discharge through the settling pond, and place discharge points downstream of and away from wells and water intakes. • Shrimp ponds and processing units meet the applicable discharge standard (MoE/BPLH Regulation No. 1/2025 for shrimp ponds; MoE Regulation No.	IMP

Issue	Prevention / mitigation measures	Resp.
	5/2014 as amended, Appendix XIV, for fish processing); ask DKP/DLH which limits apply. • Where ponds discharge near wells or water intakes, test those sources every three months against the drinking-water standard (MoH Regulation No. 2/2023) where they supply households and act at once on any change or complaint. • Store feed dry, covered and off the floor; do not use moldy ingredients; buy feed ingredients from legal sources and never from protected species. • Size settling units and filters to the pond volume and stocking; remove sludge on a set schedule and dry or compost it; record water-quality test results in a log. • Treat any wastewater from feed processing before discharge to meet MoE/BPLH Regulation No. 2/2026.	
Fish health, drugs and chemicals	• Prevent disease through biosecurity (clean equipment, quarantine new stock, remove dead fish daily). • Use only registered fish medicines as advised by fisheries officers; no banned antibiotics; respect withdrawal periods. • Bury or compost dead fish away from water; report unusual mortality to the fisheries office. • Record every fish medicine or chemical used (date, pond, product, dose and who advised it). • Filter or disinfect hatchery intake water. • Where antibiotics have been used, have harvested fish or shrimp tested for residues before sale. • In a disease outbreak, warn neighboring farmers, stop moving fish, nets and water between units, and dispose of dead fish as advised by the fisheries office.	IMP, DIN
Fish handling and processing waste	• Collect offal, scales and wash water; turn offal into fish meal, silage or compost. • Do not discharge fish waste or wash water directly to the beach, river or harbor. • Pass processing and washing water through screens, a grease trap and a settling tank or biofilter before discharge. • Keep fish waste covered and remove it at least daily; control flies and rats; odor at the nearest houses stays within the odor standard (MoE Decree No. 50/1996). • Use improved closed smoking kilns with a chimney, sited downwind of and away from houses, so that smoke at the nearest houses stays within the ambient air quality standard (GR No. 22/2021, Appendix VII). • Train processors in food hygiene and have products tested periodically.	IMP
Capture fisheries	• Use only fishing gear permitted under MMAF Regulation No. 36/2023 (Art. 7) and suited to the fishing zone and boat size. Prohibited gear (Art. 8) must not be financed or used: dogol, pair seine, cantrang, lampara dasar, bottom and mid-water trawls (pukat hela), pukat ikan, pukat harimau, perangkap ikan peloncat and muro ami. • No fishing with chemicals, biological substances, explosives, poison or electricity, or with structures that damage fish resources or their environment (Art. 10); in conservation areas follow the zoning (Art. 11). • Respect fishing zones, closed seasons, minimum sizes and local customary rules (e.g., sasi). • Do not kill, catch, trade, or extract protected species (turtles, sharks/rays listed as protected, dugong).	IMP, DIN

Issue	Prevention / mitigation measures	Resp.
	• Agree fishing zones with traditional fishers and customary right holders, building on local rules such as sasi. • Register project-supported boats with the fisheries office and keep simple catch records.	
Ice, cold storage and fuel	• Use non-ozone-depleting and, where available, low-GWP refrigerants; maintain equipment to avoid leaks. • Store and handle fuel as in ESCOP 1. • Have refrigeration installed and serviced only by trained technicians; check for leaks at each service and keep a refrigerant log. • Discharge brine and salty water away from wells, freshwater bodies and farmland. • Plan backup power (generator or solar) for cold storage.	IMP
Worker and community safety	• Provide life jackets and safe walkways around deep ponds and cages; fence ponds near houses. • Train workers on safe handling of chemicals, ice machines and sharp tools. • Prevent mosquito breeding: cover water tanks, keep pond edges free of weeds and shallow water, and drain or fill unused ponds. • Fishers supported by the project wear life jackets at sea and receive basic sea-safety training. • Work on cages and on the water in pairs, never alone. • Use trolleys and two-person lifts for fish boxes, ice blocks and feed sacks. • In cold rooms and freezers, provide insulated clothing, an inside door release, a leak detector and ventilation; enter in pairs. • Fence treatment tanks and post warning signs; give fish-smoking workers masks and heat-resistant gloves and ventilate smoking areas.	IMP

ESCOP 7. Docks, Piers and Small Coastal/Riverbank Works

Applies to: Fishing docks/piers, boat moorings and small shore protection (Package 2), and jetties and boat moorings under any package.

Issue	Prevention / mitigation measures	Resp.
Permits and siting	• Check spatial suitability and obtain KKPRL (GR No. 21/2021) or other approvals required for coastal/marine structures. • Avoid coral reefs, seagrass beds, mangroves and turtle nesting beaches; choose a site that does not block water circulation or fishing grounds. • No coastal or water reclamation and no materials from unlicensed quarries (SEHATI Exclusion List No. 17). • For river jetties and bank works, obtain the approval of the river authority (BWS/BBWS or the district public works office).	IMP, FAC, DIN
Construction in water	• Work at low tide and in calm season; avoid fish spawning periods where known. • Use silt curtains or temporary barriers to limit turbidity where feasible. • Do not dump spoil, concrete waste or rubbish into water; do not remove coral, sand or mangroves for construction. • Use treated timber only if the treatment chemicals are not toxic to aquatic life; prefer concrete or durable local timber from legal sources. • Use parts made on land (pre-cast or pre-fabricated) where possible to cut the time and work in the water.	IMP
Coastal processes	• Design to minimize erosion or sand build-up on nearby shores; consult local fishers on currents and wave patterns. • Consider sea-level rise, tides and storm waves in the deck height and structure. • Install mooring buoys so that boats do not anchor on coral or seagrass.	IMP, PIU
Operation: fuel, oil and waste	• Designate a refueling point with drip trays and a spill kit; no engine repair over water. • Provide bins for fishers and collect used oil for licensed disposal. • Clear floating rubbish and debris around the jetty regularly. • Keep absorbent pads or a small boom with the spill kit and post a simple procedure for oil on the water (stop, contain, collect, report).	IMP
Safety and access	• Install railings, lighting, ladders and life rings; post load limits. • Keep the pier open for use by all local fishers, including small-boat and women fish traders; agree user rules through community meetings. • Give decks a non-slip surface and edge guards and provide safe boarding steps that older people and people with disabilities can use. • Separate the mooring area from places where people bathe or fetch water, using buoys and signs. • Post the user rules and safety instructions (load limit, life rings, emergency contacts) at the jetty.	IMP, FAC

ESCOP 8. Green Ecotourism

Applies to: Homestays, access to tourist sites, food/souvenir stalls, tourist information centers and visitor activities (Package 3).

Issue	Prevention / mitigation measures	Resp.
Site selection and zoning	• No construction inside, or within 1 km of, a conservation area (KSA/KPA), a marine conservation area or protection forest, and not in critical habitats (SEHATI Exclusion List No. 4). • Where sites are near conservation areas or customary forests, agree zoning with the area manager and customary leaders (sacred zones off-limits, use zones, visitor zones). • Carry out FPIC where activities use customary land or resources of Masyarakat Adat. • Place buildings, shelters, towers and parking on land that is already cleared and keep the footprint compact. • Keep residents' access to traditional use areas (fishing grounds, landing places, beaches, springs, sacred sites) and free or reduced entry for villagers; tourist boats must not displace local fishing boats.	IMP, FAC, PIU
Construction	• Apply ESCOP 1; design buildings to fit local architecture and landscape; keep natural vegetation. • Use raised boardwalks or marked paths in wet, coastal or fragile areas; no clearing of mangroves or cutting of large trees for facilities. • Use permeable surfaces for parking, yards and paths, and plant trees or shrubs around parking areas. • Make visitor centers, toilets and main paths usable by people with disabilities and older people where the terrain allows. • Use durable signs with low-toxicity paints; keep the number and size of signs to what is needed.	IMP
Sanitation and wastewater	• Provide toilets with septic tanks built to SNI 2398:2017, at least 10 m from wells, with soakaway or biofilter; empty sludge regularly. • No discharge of kitchen or toilet wastewater to rivers, lakes or the beach. • Connect to a communal IPAL where one is available; any treated discharge meets MoE/BPLH Regulation No. 11/2025. • Water supplied to guests for drinking and cooking meets the drinking-water standard, and water for bathing and washing meets the hygiene and sanitation water standard (MoH Regulation No. 2/2023); have it tested before opening and at regular intervals.	IMP
Solid waste	• Provide separate bins at homestays, stalls and trails; apply "carry in, carry out" on trails. • Reduce single-use plastics (refill water stations, reusable containers). • Link with TPS3R or waste banks; no open burning or dumping.	IMP
Water and energy	• Use water-saving taps and rainwater harvesting; do not take water that the community needs in the dry season. • Use energy-efficient lighting and solar power where feasible. • Size water storage for peak visitor days within the dry-season supply and fit water-saving toilets. • Design buildings for natural ventilation and daylight. • Promote walking, bicycles or shuttles between the parking area and the site.	IMP
Noise and lighting	• Agree quiet hours with the nearest households and keep to them; no amplified sound outside those hours.	IMP

Issue	Prevention / mitigation measures	Resp.
	• Hold music and events in one designated area, away from houses, places of worship and wildlife areas; keep sound at the nearest houses within 55 dB(A) (MoE Decree No. 48/1996) or the stricter EHS limit in ESCOP 1. • Keep outdoor lighting low, shielded and pointed downwards; switch off what is not needed at night. • Use warm-colored (amber) lights and do not light turtle-nesting beaches or other sensitive habitats.	
Wildlife and habitat protection	• Set visitor capacity and opening hours; keep visitors on designated trails. • No feeding, touching, chasing or collecting wildlife, plants, corals or shells; no sale of products from protected species or from threatened species (IUCN VU/EN/CR) taken from the wild (SEHATI Exclusion List No. 5; E&S Screening Form item 1.8). • Limit noise and night lighting near wildlife areas; monitor site condition and visitor numbers. • Close or limit access near breeding or nesting sites during the season. • No campfires or smoking by visitors in forest or dry grassland; cooking only at designated fire-safe spots. • Install mooring buoys so that boats do not anchor on coral or seagrass. • Record daily visitor numbers and do not exceed the agreed limit.	IMP, FAC
Culture and sacred sites	• Inform visitors of local customs, dress codes and restricted sacred areas; display signs. • Involve customary leaders in guiding rules; commercial use of cultural heritage only with community agreement and fair benefit sharing. • Agree a visitor code of conduct with customary leaders and display it at entrances and homestays. • Let customary leaders decide which ceremonies are shown to visitors; do not stage ceremonies for tourists and keep visitors out of closed ceremonies.	IMP, FAC
Guest and community safety	• Provide first-aid kits, fire extinguishers, life jackets for water activities and safety signs at cliffs, rivers and beaches. • Train guides in first aid and emergency response. • Install railings on steep trail sections, stairs, boardwalks, towers and viewpoints. • Keep a life ring with a rope at swimming spots and other waterside attractions; every tourist boat carries a life jacket for each person on board, and everyone wears it. • Boat operators and drivers carrying tourists hold a valid license and safety training; dives are led by a certified guide with no more than four divers per guide. • Food vendors and homestay cooks receive food hygiene training and hold a valid health certificate. • Inspect stalls and visitor structures for safety and close any unsafe structure until it is repaired.	IMP
SEA/SH and child protection	• Homestay operators and guides sign a Code of Conduct; zero tolerance for sexual exploitation, including of children. • Provide safety guidelines for homestay operators (especially women and youth) and a confidential way to report incidents through the FGRM. • No child labor in homestays, stalls, guiding or boat services: no one under 15, and no one under 18 on hazardous work.	IMP, FAC

ESCOP 9. Food Security: Farming, Irrigation, Small Reservoirs and Post-harvest

Applies to: Land preparation, micro-irrigation canals, small reservoirs/ponds, floor dryers and post-harvest facilities (Package 4).

Issue	Prevention / mitigation measures	Resp.
Land use and land preparation	• Use existing farmland; no conversion of natural forest, peat, mangroves or wetlands (SEHATI Exclusion List No. 15). • No land clearing by burning; use slash-and-mulch or mechanical methods. • No new drainage canals in peatland.	IMP, FAC
Soil conservation	• Plant along contours; use terraces, cover crops, mulch and crop rotation. • Avoid using tractors on wet soil to prevent compaction. • Keep vegetated strips along rivers and canals.	IMP
Pest management and pesticides	• Apply Integrated Pest Management (PHT): monitor pests, use resistant varieties, natural enemies and biological controls first. • Use pesticides only as a last resort, and only products registered by the Ministry of Agriculture (MoA Regulation No. 43/2019). • Do not procure or use formulated products in WHO Class Ia, Ib or II (SEHATI Exclusion List No. 8); check the class of the formulation, not only the active ingredient, using Appendix A and the WHO 2019 Classification. • Do not use pesticides listed under the Stockholm or Rotterdam Conventions; fumigants (e.g., aluminum phosphide) only by trained and licensed applicators. • Follow label dosage; do not spray near water, in wind or rain; keep children and animals away. • Wear PPE (mask, gloves, boots, long clothes); wash after spraying. • Store pesticides in a locked, ventilated place away from food and water; triple-rinse empty containers, puncture and hand them to the supplier, a licensed B3 waste collector or a collection point agreed with DLH; never reuse for food or water. • Train all farmers who use pesticides, including women, in IPM and safe handling before pesticides are bought. • Keep the pre-harvest interval on the label and arrange residue testing with the agriculture office before produce is marketed.	IMP, DIN
Fertilizer use	• Apply fertilizer based on soil and crop needs; use compost and manure to reduce chemical fertilizer. • Do not apply fertilizer just before heavy rain or near water bodies. • Under greenhouses and continuously cropped plots, check the soil once a year with the extension officer.	IMP
Seeds and invasive species	• Use certified or locally adapted seed. Do not bring in any plant or animal that is not already grown or kept in the village. If the group wants one, the facilitator asks the PIU, and the PIU obtains written confirmation from the agriculture or fisheries office that it is permitted and not invasive. Do not plant or stock it until that confirmation is in hand. • Clean tools and machines before moving between areas to avoid spreading weeds and pests.	IMP

Issue	Prevention / mitigation measures	Resp.
Irrigation and water sharing	• Check downstream users and water availability before building canals or pumps; do not take water in amounts that affect others. • Agree fair water-sharing rules through P3A/farmer groups, involving women, poorer and downstream farmers; obtain water-use approval where required (ESCOP 1). • Install screens at intakes; line canals on erosion-prone sections; maintain canals regularly. • For wells and solar pumps, size abstraction to the dry season yield and do not lower neighboring wells (ESCOP 1); see ESCOP 4. • State the expected abstraction rate in the design, and report the combined effect where several wells or intakes share one source in the same village or catchment. • Always leave enough water flowing downstream for other users and for aquatic life, especially in the dry season; never take the whole flow. • Provide field drains to prevent waterlogging and salt build-up. • Line canals where seepage losses are high. • Use water-saving irrigation (drip, micro-spray, scheduled watering) where feasible, especially for pumped water, nurseries and greenhouses. • Where irrigation water may be polluted, have it tested and share the results with all users. • Keep canals and drains flowing and free of stagnant water and cover water tanks. • Where the scheme is one of several taking water from the same river, spring, aquifer or irrigation area, the DCT carries out the cumulative water check in ESMF Section 5.3 before approval; follow the limits, phasing or water-sharing schedule it sets.	IMP, FAC
Small reservoirs and ponds	• Design and supervise embankments and spillways by a qualified engineer; no dams above 15 m (SEHATI Exclusion List No. 14). • Fence ponds near houses and schools; put up warning signs; provide a rope/life ring. • Prevent mosquito breeding: remove weeds, avoid shallow stagnant edges, stock larvae-eating fish where suitable. • Inspect embankments after heavy rain and repair cracks or seepage. • Build reservoirs off-stream where possible; if a stream must be dammed, keep a release downstream.	IMP, PIU
Floor dryers and post-harvest	• Locate dryers away from roads and houses to reduce dust; keep drainage around the floor. • Reuse husks and straw as compost, mulch, feed or fuel; no open burning of residues. • Store grain in dry, pest-proof storage; avoid fumigants unless applied by trained and licensed applicators. • Where a fuel- or biomass-fired dryer is used, fit a chimney above the roof line, keep it maintained, and site the dryer downwind of houses. • Prefer solar dryer domes where they work (ESCOP 4). • Do dusty work (drying, milling, shelling) in an enclosed or well-ventilated area, fit dust collectors where available, damp-sweep and give workers dust masks. • In grain stores and silos, keep dust down and ban smoking, open flames and spark sources; post no-smoking signs. • Dry grain to a safe moisture level before storage, use stock first-in-first-out, check for mold and have moldy lots tested for aflatoxin; do not sell or distribute grain that fails the test. • Compost spoiled produce and send packaging to the waste bank or TPS3R.	IMP

Issue	Prevention / mitigation measures	Resp.
	• Pass produce wash water through a screen and a settling pit before discharge. • Engines of dryers and mills meet the engine emission standard (MoEF Regulation No. 11/2021). At the nearest houses, smoke and dust stay within the ambient air quality standard (GR No. 22/2021, Appendix VII) and noise stays within 55 dB(A) (MoE Decree No. 48/1996) or the stricter EHS limit in ESCOP 1.	

ESCOP 10. Livestock and Biogas

Applies to: Collective livestock farms, farm roads, biogas digesters and livestock waste treatment centers (Package 5).

Issue	Prevention / mitigation measures	Resp.
Siting	• Locate barns and manure storage away from houses, wells, rivers and schools, and downwind of settlements. • Consult neighbors before construction; agree measures for odor and flies. • Place barns and pens at least 100 m from the nearest house, downwind, and at least 50 m from rivers, wells and other water bodies. • Place quarantine pens downwind, at least 50 m (100 m where possible) from houses, main roads and healthy herds, with a double fence.	IMP, FAC
Barn design and water	• Use concrete or impermeable floors sloping to a collection drain; separate clean rainwater with gutters. • Fence animals away from rivers and drinking-water sources. • Use water efficiently for cleaning and drinking. • Pass wash water from barns, milking areas and chillers through a settling tank or soak pit (with a grease trap first where it carries fat or blood). • Any discharge from pens, milking areas and chillers meets the applicable wastewater standard (MoE Regulation No. 5/2014 as amended: Appendix XX for cattle and pig farms, Appendix VIII for milk processing, Appendix XLV for slaughterhouses and Appendix XLVII for other livestock); ask the DLH which limits apply. • Ventilate poultry houses with curtain sidewalls and, where needed, fans; keep litter dry. • Keep goats, sheep and cattle penned or tethered so that they do not stray into crops, and keep children out of pens. • Place troughs away from wells and streams on a hard, drained surface; check for leaks and disinfect shared troughs weekly. • Where livestock share a water source with households, give household drinking water priority in written village rules and fit float valves or timers.	IMP
Manure and urine management	• Collect manure daily; store it covered on a hard surface; compost or feed it into the biogas digester. • Apply manure or compost to fields at suitable rates and times; not before heavy rain or near water. • Do not keep more animals than the barn is designed for. • In litter-floor poultry houses, remove litter at the end of each cycle, or sooner if wet, and compost it under cover. • When composting, turn piles on a set schedule, check that they heat up enough to kill pathogens, keep carcasses and veterinary waste out, and record inputs and outputs. • Compost manure from quarantined or sick animals separately. • Feed spoiled milk to animals or put it into the digester; compost or bury spoiled products away from water. • Odor at the nearest houses stays within the odor standard (MoE Decree No. 50/1996).	IMP
Animal health and zoonoses	• Register animals and vaccinate them with the local livestock/veterinary service (Puskeswan). • Quarantine new animals; isolate sick animals; report sudden deaths or suspected disease (e.g., anthrax, avian influenza, FMD/PMK, LSD) immediately.	IMP, DIN

Issue	Prevention / mitigation measures	Resp.
	• Do not open carcasses of animals that died suddenly; dispose of carcasses by burial in a designated pit with lime, covered by at least 1 m of soil, away from water sources, or as directed by the veterinary officer. • Wash hands after handling animals; restrict visitor access to barns. • Control flies, rats and pest birds by IPM (cleaning, fly screens, traps); use only rodenticides allowed under Appendix A. • With the Puskeswan, train workers on zoonoses and biosecurity, brief nearby households, and arrange regular animal health checks. • Keep poultry in closed housing with bird netting; put footbaths at entrances and empty the used solution into a soak pit away from water. • If avian influenza or another zoonosis is suspected, tell the village head and nearby households at once and follow the veterinary officer's instructions.	
Veterinary medicines	• Use medicines only as advised by a veterinarian/paravet; no antibiotic growth promoters in feed (MoA Regulation No. 14/2017). • Keep treatment records and respect withdrawal periods for milk, eggs and meat. • Collect used syringes, needles and vials in a sealed container and hand over to Puskeswan or a licensed medical waste collector. • Store veterinary medicines, disinfectants and sanitizers in a separate locked place, never with feed or milk; use approved sanitizers at the label dose.	IMP, DIN
Feed	• Store feed dry and covered; use local residues where safe. • Do not expand grazing or cut forage in protected or natural forest areas. • Grind and mix feed in an enclosed or ventilated room and give workers dust masks. • Build feed stores moisture-proof and pest-proof and use the oldest stock first. • Keep a fire extinguisher at feed stores and mills; no smoking or open flames inside. • Treat any wastewater from feed processing before discharge to meet MoE/BPLH Regulation No. 2/2026.	IMP
Animal welfare	• Provide enough space, shade, clean water and feed; handle and transport animals calmly without injuring them. • Slaughter animals humanely by trained slaughterers following Indonesian halal standards.	IMP
Biogas digesters	• Use trained and experienced installers; follow the design for size and slurry input. • Check pipes, valves and the gas holder for leaks regularly (soap-water test); repair immediately. • No smoking or open flames near the digester and gas storage; install in a ventilated, fenced location. • Manage digestate/slurry in a covered pit or drying bed and use it as fertilizer; prevent overflow to drains. • Train users (including women who cook) on safe use and what to do if gas smells. • Use the gas and do not vent it; keep the inlet area clean. • Never enter a digester or slurry pit unless it has been emptied and aired out, with a second person outside. • Place the digester away from wells and water bodies.	IMP, FAC
Noise and vibration	• Run feed mills, pumps and construction work during daytime hours only; agree hours with neighbors. Barn ventilation fans that must run at night are low-noise and placed on the side away from houses.	IMP

Issue	Prevention / mitigation measures	Resp.
	• Maintain equipment; place noisy machines and vehicle routes away from houses; use enclosures or a vegetated buffer where needed. • Agree fixed slaughter hours with neighbors and keep to them. • Keep noise at the nearest houses within 55 dB(A) (MoE Decree No. 48/1996) or the stricter EHS limit in ESCOP 1, and vibration within the vibration standard (MoE Decree No. 49/1996); generators running on biogas or fuel meet the engine emission standard (MoEF Regulation No. 11/2021).	
Worker health and safety	• Provide boots, gloves and masks; train handlers on safe animal handling to avoid kicks and bites. • No children working with large animals or cleaning manure pits. • Give animal and manure workers overalls, boots and gloves; in poultry houses, quarantine pens and compost work, add N95 respirators and goggles. • Arrange worker vaccination through the Puskesmas (e.g., tetanus and rabies for animal handlers, hepatitis B for slaughter workers). • Reduce manual handling with trolleys, ramps and two-person lifts, and rotate repetitive tasks.	IMP

ESCOP 11. Productive Tools and Equipment

Applies to: Procurement and use of tools, machinery, boats/engines, cold storage and processing equipment for the five packages (Component 1), including fuel-efficient tractors, solar water pumps, biogas digesters, waste compactors and digital equipment.

Issue	Prevention / mitigation measures	Resp.
Procurement screening	• Screen all items against the SEHATI Exclusion List and include a procurement negative list in bidding documents. • Exclude: fishing gear prohibited under MMAF Regulation No. 36/2023 (Art. 8), pesticide formulations in WHO Class Ia, Ib or II (see Appendix A), pesticides not registered with the Ministry of Agriculture or listed under the Stockholm or Rotterdam Conventions, equipment containing ozone-depleting refrigerants, asbestos products, and military or dual-use goods.	PIU
Technical specification	• Select right-sized, energy-efficient and low-emission equipment suited to local conditions and culture. • Require warranty, spare parts, operating manuals in Bahasa Indonesia and after-sales service. • Consider ergonomics and ease of use for women and older users. • For cold storage, ice makers and chillers specify non-ozone-depleting, low-GWP refrigerants (e.g., R-290, R-600a, R-744) where available, and consider solar or other backup power. • Require in supply contracts a warranty, preventive maintenance and a repair service for cold storage and ice machines. • Buy vehicles and engines that meet the national emission standard, and energy-efficient digital devices. • Design greenhouses for natural ventilation. • Digital systems collect only the data needed and protect stored data. • Choose well-insulated cold storage units, chillers and ice makers sized to the expected volume. • Specify engines and generators that meet the engine emission standard (MoEF Regulation No. 11/2021) and vehicles that meet the national vehicle emission standard, and keep vehicles more than three years old within the in-use emission standard (MoEF Regulation No. 8/2023); where the EHS Guidelines are stricter, specify the stricter level (Part A, section 1).	IMP, PIU
Fuel and oil storage	• Store fuel in approved, labeled containers in a ventilated, shaded, locked place on a hard surface with drip trays. • Keep fuel at a distance from houses, drains (≥50 m) and important water bodies (≥100 m) where possible; no smoking nearby; keep a fire extinguisher/sand. • Collect used oil, filters and batteries and return them to the supplier or a licensed collector. • Refuel and change oil at one designated spot, using a drip tray.	IMP
Safe operation	• Vendors provide hands-on training on safe operation and maintenance at delivery. • Only trained adults operate machines; use guards and PPE; follow the manual. • Agree rules for moving machinery on village roads (speed, time, escorts) to protect pedestrians and children. • Tractors: no passengers or children riding; take extra care on slopes and field edges. • Fit powered machines with an emergency stop within the operator's reach.	IMP

Issue	Prevention / mitigation measures	Resp.
	• Connect electric equipment through proper wiring, circuit breakers and earthing; use earth-leakage breakers (RCD/ELCB) for equipment used near water or on wet floors. • For walk-in cold rooms, provide warm clothing, set time limits, and fit an inside door release and an alarm. • Train cold-storage operators in cold-chain management so that stock does not spoil during power cuts. • Provide PPE suited to the equipment (cold, wet or hot work). • Run mills and mixers in an enclosed or ventilated room, with a dust hood where possible. • Drivers hold a valid license (SIM) and defensive-driving training; check brakes, lights and tires regularly; post road safety signs where the vehicle often operates.	
Maintenance and end of life	• Keep a maintenance and use logbook; service equipment regularly to reduce fuel use, noise and leaks. • At end of life, sell for reuse or scrap through licensed collectors; do not dump or burn. • Have refrigeration units serviced only by trained technicians; check for leaks, record refills and never release refrigerant to the air. • Return used tires to the supplier or a recycler; do not burn or dump them.	IMP
Noise and vibration	• Choose low-noise equipment where available; keep silencers and mufflers in working order. • Operate tractors, generators, compactors and processing machines during daytime hours and away from houses, schools and places of worship. • Provide hearing protection for operators of noisy machines. • Mount mills, engines and generators on a solid base with anti-vibration pads, so that vibration at nearby buildings stays within the vibration standard (MoE Decree No. 49/1996). • Switch off engines while waiting; no idling near houses, markets or schools. • Keep noise at nearby houses within 55 dB(A) (MoE Decree No. 48/1996) and, where stricter, within the EHS General Guidelines limits of 55 dB(A) by day and 45 dB(A) at night, or no more than 3 dB(A) above the existing background level.	IMP, PIU
Climate and disaster risk	• Store equipment, batteries and spare parts in a dry, secure place above flood level. • Anchor solar panels, roofs and light structures against strong winds; protect equipment from heat and heavy rain. • Consider local climate and disaster conditions when specifying equipment and choosing the storage location; include protection and maintenance in the O&M plan.	IMP, FAC
Batteries and e-waste	• Include take-back arrangements for batteries and digital equipment (routers, computers, tablets) in procurement contracts. • Store broken electronics and batteries in a dry box; hand over to the supplier or a licensed collector; do not burn, dump or open them.	IMP, PIU
Fair access and use	• Agree transparent criteria and a schedule for group use of equipment, prioritizing groups/cooperatives and including women and poorer households. • Consult Masyarakat Adat on whether the equipment is culturally appropriate before purchase. • Agree that equipment will not be used to open forest, peat or other natural habitats.	IMP, FAC

Issue	Prevention / mitigation measures	Resp.
	• Apply the same rules to shared facilities (processing house, cold storage, warehouse, kiosk): post the criteria, fees and results, open them to all producers including women, youth and smallholders, and record use and payments in an open ledger. • Give small-scale fishers priority for ice and cold storage; set a daily limit per boat in the peak season. • Allocate ponds, cages and shared facilities through an inclusive group with women members. • Where tickets are digital, keep a staffed desk for walk-in visitors. • For digital systems, train users including women, older people and youth, keep an offline backup of critical records and share outputs in plain language.	

Appendix A. Pesticide Hazard Classification Guide

This guide helps facilitators and farmer groups check whether a pesticide may be used under SEHATI. It is based on the WHO Recommended Classification of Pesticides by Hazard, 2019 edition. The WHO class is based mainly on acute oral and dermal toxicity to rats (LD50).

Important: the WHO tables classify technical-grade active ingredients. The final class applies to the formulated product as sold. A diluted formulation can fall into a lower hazard class than its active ingredient. Check the product label or safety data sheet, or ask the agricultural extension officer (PPL/POPT). If unsure, treat the product as the class of its active ingredient.

WHO class	Hazard level	Rat LD50 oral / dermal (mg/kg bw)	SEHATI status	Examples of active ingredients (technical grade, WHO 2019)
Ia	Extremely hazardous	< 5 / < 50	**Not allowed**	Brodifacoum, bromadiolone (rodenticides)
Ib	Highly hazardous	5–50 / 50–200	**Not allowed**	Carbofuran, methomyl, dichlorvos, abamectin, zinc phosphide
II	Moderately hazardous	50–2,000 / 200–2,000	**Not allowed (SEHATI Exclusion List No. 8)**	Paraquat, 2,4-D, glufosinate-ammonium, cypermethrin, deltamethrin, lambda-cyhalothrin, chlorpyrifos, profenofos, diazinon, carbaryl, fipronil, imidacloprid, metaldehyde
III	Slightly hazardous	> 2,000 / > 2,000	**Allowed if registered, with IPM, PPE and safe storage**	Glyphosate, malathion
U	Unlikely to present acute hazard	≥ 5,000	**Allowed if registered, with IPM, PPE and safe storage**	Mancozeb, propineb, chlorantraniliprole
FM	Fumigants (not classified by LD50)	–	**Only by trained, licensed applicators**	Aluminum phosphide

- Also not allowed, whatever the WHO class: highly hazardous pesticides (FAO/WHO criteria), such as active ingredients that are carcinogenic, mutagenic or toxic to reproduction (GHS

Category 1A/1B), or listed under the Stockholm Convention, Rotterdam Convention (Annex III) or Montreal Protocol.

- The examples are for illustration only and are not a full list. Always check the latest WHO tables and the Ministry of Agriculture pesticide registration database before approval.
- Note for the ESMF team: World Bank ESS3 allows Class II products if the project has proper controls. The SEHATI Exclusion List and E&S Screening Form (item 1.11) are stricter and exclude Class Ia, Ib and II.

Part C. Field Monitoring Checklist

Field Monitoring Checklist – ESCOP 1: General Construction

Village: ..... Subproject: ..... Date: .....

Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	Site passed Exclusion List and E&S Screening; land access agreement documented	☐	☐	☐	
2	Work area fenced/roped off with warning signs; children kept away	☐	☐	☐	
3	Stockpiles covered; dust controlled; no burning of waste or vegetation	☐	☐	☐	
4	Erosion and drainage controls in place; no soil or waste entering water bodies	☐	☐	☐	
5	Fuel/chemicals stored on hard surface with drip trays; no spills observed	☐	☐	☐	
6	Waste separated and disposed of at agreed site; used oil collected	☐	☐	☐	
7	Workers use appropriate PPE; first-aid kit available; accidents recorded	☐	☐	☐	
8	No workers under 18 on hazardous work (none under 15); Code of Conduct signed	☐	☐	☐	
9	Notice board with FGRM contacts displayed; complaints recorded and followed up	☐	☐	☐	
10	Sand, gravel and stone bought from established suppliers; none taken directly from riverbeds, beaches or mangroves; no coral, seagrass or reclamation	☐	☐	☐	
11	Site restored and cleared after works	☐	☐	☐	
12	Biodiversity screening complete: Part BIO-2 for the activity, Part BIO-3 verification, and Part BIO-4 where the activity was referred to the CPMU	☐	☐	☐	

No	Check item	Yes	No	N/A	Notes / follow-up
13	Site is more than 1 km from any conservation area, marine conservation area or protection forest	☐	☐	☐	
14	Workers briefed on the wildlife chance find procedure; any find stopped work and was reported (ESMF Annex V, Appendix E)	☐	☐	☐	
15	Purchased timber has SVLK or equivalent proof of legal origin; felled timber not sold or traded; clearance not widened to recover timber	☐	☐	☐	
16	Emergency contacts, evacuation route and assembly point posted on site	☐	☐	☐	
17	No new asbestos-containing materials used; any existing asbestos removed wet, in whole sheets, with PPE, and handed to a licensed B3 collector	☐	☐	☐	
18	Approval or license for groundwater, spring or river water obtained before the well was drilled or the water used, where required (E&S Screening Form item 1.3; ESCOP 1)	☐	☐	☐	
19	Works only in the agreed daytime hours; noise and vibration at the nearest houses within the limits in this ESCOP; no complaints left open	☐	☐	☐	
20	Drinking-water source protected; drinking water tested against MoH Regulation No. 2/2023 before first use	☐	☐	☐	
21	Graves, sacred sites and other heritage kept outside the agreed buffer; any chance find stopped work and was reported (ESMF Annex VIII)	☐	☐	☐	

Agreed follow-up actions / deadline:

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Facilitator signature: ..... Implementer signature: .....

Field Monitoring Checklist – ESCOP 2: Roads and Access Paths

Village: ..... Subproject: ..... Date: .....

Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	Alignment avoids forest, mangroves, peat and steep/unstable slopes	☐	☐	☐	
2	Side drains, cross drains and outlets built and functioning	☐	☐	☐	
3	Slopes protected (grass, stones, terracing); no active erosion	☐	☐	☐	
4	Culverts sized and clear; stream crossings stable	☐	☐	☐	
5	Road safety signs installed; maintenance plan agreed	☐	☐	☐	
6	Alignment follows the existing track; no new access created into natural forest, a conservation area or previously inaccessible habitat	☐	☐	☐	

Agreed follow-up actions / deadline:

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Facilitator signature: ..... Implementer signature: .....

Field Monitoring Checklist – ESCOP 3: Agroprocessing Facilities

Village: ..... Subproject: ..... Date: ..... Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	Wastewater passes through trap/treatment before discharge; no untreated discharge	☐	☐	☐	
2	Organic residues stored covered and reused/removed regularly	☐	☐	☐	
3	Chemicals labeled and stored away from food; empty containers not reused	☐	☐	☐	
4	Machine guards in place; operators trained; PPE used	☐	☐	☐	
5	Wiring safe; fire extinguisher/sand available; exits clear	☐	☐	☐	
6	Dryer or stove fitted with a chimney; no smoke, dust or odor nuisance to neighbors	☐	☐	☐	
7	Facility at a safe distance from wells, rivers and houses and outside flood-prone areas	☐	☐	☐	
8	Discharge meets the applicable wastewater standard (sector appendix of MoE Regulation No. 5/2014, MoE/BPLH Regulation No. 2/2026 or No. 11/2025); test results kept where required	☐	☐	☐	
9	Process and wash water tested against the drinking-water standard (MoH Regulation No. 2/2023)	☐	☐	☐	
10	Hygiene practices followed; product registration (PIRT/halal) in place where required; workers trained in GMP	☐	☐	☐	

Agreed follow-up actions / deadline:
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Facilitator signature: ..... Implementer signature: .....

Field Monitoring Checklist – ESCOP 4: Off-grid Solar (PLTS)

Village: ..... Subproject: ..... Date: .....

Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	Installed by competent installer; reporting/SLO requirements checked	☐	☐	☐	
2	Battery room/box ventilated, locked and away from children	☐	☐	☐	
3	Operators trained; O&M logbook kept	☐	☐	☐	
4	Take-back arrangement for used batteries/panels in place	☐	☐	☐	
5	No damaged or dumped batteries on site	☐	☐	☐	
6	Solar pump sized to the water source; no complaints from neighboring well users	☐	☐	☐	
7	Panels, inverters, charge controllers and batteries certified, with warranty and after-sales service	☐	☐	☐	
8	Ground-mounted systems fenced; children kept away from panels, cables and battery rooms	☐	☐	☐	
9	Approval or license obtained before pumping from a well, where required (E&S Screening Form item 1.3)	☐	☐	☐	

Agreed follow-up actions / deadline:
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Facilitator signature: ..... Implementer signature: .....

Field Monitoring Checklist – ESCOP 5: Waste Management Facilities

Village: ..... Subproject: ..... Date: .....

Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	Type A: at least 50 m from the nearest house and downwind; no odor or flies reaching houses	☐	☐	☐	
2	Roofed, impermeable floor; leachate collected, not flowing to drains	☐	☐	☐	
3	No open burning; site clean; odor and flies under control	☐	☐	☐	
4	Hazardous household waste collected separately	☐	☐	☐	
5	Compactor on hard, drained surface with leachate collection	☐	☐	☐	
6	Workers use PPE; waste pickers identified and involved	☐	☐	☐	
7	Type B: roofed, hard, drained spot; containers closed and emptied at least twice a week	☐	☐	☐	

Agreed follow-up actions / deadline:
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Facilitator signature: ..... Implementer signature: .....

Field Monitoring Checklist – ESCOP 6: Aquaculture and Fisheries

Village: ..... Subproject: ..... Date: .....

Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	No mangrove, peat or wetland converted for ponds	☐	☐	☐	
2	Species native/approved; screens on inlets/outlets to prevent escape	☐	☐	☐	
3	Stocking and feeding records kept; settling pond used before discharge	☐	☐	☐	
4	No wild-caught protected/threatened species used as seed or broodstock without permits	☐	☐	☐	
5	Only registered fish medicines used; dead fish disposed of properly	☐	☐	☐	
6	Fish waste collected and reused; not discharged to beach/river	☐	☐	☐	
7	Only permitted fishing gear used; no protected species caught or traded	☐	☐	☐	
8	Pond and processing discharge meets the applicable standard (MoE/BPLH Regulation No. 1/2025 for shrimp ponds; MoE Regulation No. 5/2014, Appendix XIV, for fish processing); nearby household wells tested where ponds discharge near them	☐	☐	☐	
9	Smoking kilns fitted with a chimney and sited downwind of and away from houses	☐	☐	☐	
10	Non-ozone-depleting refrigerants used and refrigerant log kept; brine discharged away from wells, freshwater and farmland	☐	☐	☐	
11	Life jackets used for work on water; ponds near houses fenced; cold rooms have an inside door release	☐	☐	☐	

Agreed follow-up actions / deadline:

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Facilitator signature: ..... Implementer signature: .....

Field Monitoring Checklist – ESCOP 7: Docks and Piers

Village: ..... Subproject: ..... Date: .....

Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	KKPRL/required approvals obtained; no reclamation	☐	☐	☐	
2	No coral, seagrass or mangrove damaged; no spoil dumped into water	☐	☐	☐	
3	Refueling point with drip tray and spill kit; used oil collected	☐	☐	☐	
4	Railings, lighting and life rings installed	☐	☐	☐	
5	User rules agreed; access open to all local fishers	☐	☐	☐	

Agreed follow-up actions / deadline:
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Facilitator signature: ..... Implementer signature: .....

Field Monitoring Checklist – ESCOP 8: Green Ecotourism

Village: ..... Subproject: ..... Date: .....

Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	Site more than 1 km from any conservation area, marine conservation area or protection forest, and outside critical habitats; zoning agreed with area manager and customary leaders	☐	☐	☐	
2	FPIC documented where customary land/resources are used	☐	☐	☐	
3	Septic tanks ≥10 m from wells; no wastewater discharge to water bodies	☐	☐	☐	
4	Separated bins available; no open burning or dumping	☐	☐	☐	
5	Visitor rules, capacity and designated trails in place; no wildlife feeding/collection	☐	☐	☐	
6	Sacred areas marked and respected	☐	☐	☐	
7	Homestay operators/guides signed Code of Conduct; reporting channel known	☐	☐	☐	
8	First-aid and safety equipment available	☐	☐	☐	
9	Amplified sound and events kept to the agreed hours and to the designated area	☐	☐	☐	
10	Water for guests tested against the drinking-water and hygiene-sanitation standards (MoH Regulation No. 2/2023)	☐	☐	☐	
11	Outdoor lights shielded and pointed downwards; no lighting of turtle-nesting beaches or other sensitive habitats	☐	☐	☐	

Agreed follow-up actions / deadline:
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Facilitator signature: ..... Implementer signature: .....

Field Monitoring Checklist – ESCOP 9: Food Security

Village: ..... Subproject: ..... Date: .....

Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	No burning for land clearing; no conversion of forest, peat or mangroves	☐	☐	☐	
2	Soil conservation measures applied on slopes	☐	☐	☐	
3	IPM applied; only registered pesticides, none in WHO Class Ia, Ib or II	☐	☐	☐	
4	Pesticides stored locked; PPE used; empty containers collected	☐	☐	☐	
5	Water-sharing rules agreed; downstream users not affected	☐	☐	☐	
6	Reservoir/pond designed by qualified engineer, fenced and signed; embankment in good condition	☐	☐	☐	
7	No mosquito breeding observed; no burning of post-harvest residues	☐	☐	☐	
8	No plant or animal introduced that is not already grown or kept in the village, unless the PIU has written confirmation	☐	☐	☐	
9	Expected abstraction rate stated in the design; combined effect of multiple wells or intakes on one source reported	☐	☐	☐	
10	Fertilizer applied to soil and crop needs; none applied just before heavy rain or near water bodies	☐	☐	☐	
11	Fuel- or biomass-fired dryers fitted with a chimney and sited downwind; no smoke, dust or noise nuisance to neighbors	☐	☐	☐	

Agreed follow-up actions / deadline:

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Facilitator signature: ..... Implementer signature: .....

Field Monitoring Checklist – ESCOP 10: Livestock and Biogas

Village: ..... Subproject: ..... Date: .....

Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	Barns and manure storage away from houses, wells and rivers	☐	☐	☐	
2	Impermeable floors and drains; manure collected and stored covered	☐	☐	☐	
3	Animals vaccinated/registered; sick animals isolated; deaths reported	☐	☐	☐	
4	Carcasses disposed of properly; medical waste collected	☐	☐	☐	
5	No antibiotic growth promoters used; treatment records kept	☐	☐	☐	
6	Biogas: no leaks, no open flame nearby, fenced, digestate managed	☐	☐	☐	
7	Noisy work (feed mill, pumps, construction) limited to agreed daytime hours	☐	☐	☐	
8	Handlers use PPE; no children working with animals or manure pits	☐	☐	☐	
9	No grazing expansion or forage cutting in protected areas, protection forest or natural forest	☐	☐	☐	
10	Wash water from barns and milking areas passes through a settling tank or soak pit; any discharge meets the applicable standard in this ESCOP	☐	☐	☐	
11	Animals have enough space, shade, clean water and feed; handled and transported calmly; slaughter humane and halal	☐	☐	☐	

Agreed follow-up actions / deadline:

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Facilitator signature: ..... Implementer signature: .....

Field Monitoring Checklist – ESCOP 11: Productive Equipment

Village: ..... Subproject: ..... Date: .....

Checked by: .....

No	Check item	Yes	No	N/A	Notes / follow-up
1	Items screened against Exclusion List/procurement negative list	☐	☐	☐	
2	Operating manual and training provided at delivery	☐	☐	☐	
3	Fuel stored safely with drip trays and fire extinguisher/sand	☐	☐	☐	
4	Maintenance logbook kept; used oil and batteries returned/collected	☐	☐	☐	
5	Take-back arrangement for batteries and digital equipment (e-waste)	☐	☐	☐	
6	Noisy equipment operated in daytime, away from houses; hearing protection used	☐	☐	☐	
7	Equipment and batteries stored dry, above flood level; panels and roofs anchored	☐	☐	☐	
8	Transparent user schedule agreed, including women and poorer households	☐	☐	☐	
9	Engines, generators and vehicles meet the emission standards in this ESCOP; refrigeration units use non-ozone-depleting, low-GWP refrigerants	☐	☐	☐	

Agreed follow-up actions / deadline:
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Facilitator signature: ..... Implementer signature: .....

ANNEX IV: Simplified Occupational Health and Safety Procedure

1. Purpose and Scope

This Simplified Occupational Health and Safety (OHS) Procedure provides practical minimum requirements for protecting workers and communities during SEHATI-supported village activities. It is written for use by Village Governments, Village Implementation Teams (TPK), facilitators, contractors, service providers, operators, and community workers.

- Applies to village infrastructure and facility investments, productive tools and equipment, community implementation arrangements, cash-for-work, gotong royong or other voluntary community labor, and relevant operation and maintenance activities.
- Uses proportionate, plain-language requirements suited to small-scale village activities. More complex or higher-risk matters require technical or E&S review.
- Protects direct, contracted and community workers engaged at village level. Contractor and supplier obligations remain applicable to their respective workers.
- Requires safe planning, worker orientation, task-appropriate controls, incident reporting, emergency preparedness, worker grievance access, and monitoring.

Core principle. All Project work must be planned and performed so that hazards are identified, risks are controlled, workers are trained, and unsafe work is stopped or corrected.

2. Relationship with the LMP and Annex III ESCOPs

This procedure operationalizes relevant village-level requirements of the SEHATI Labor Management Procedures (LMP). It does not replace the LMP. Where there is a difference, the LMP, ESMF, ESCP, applicable national requirements, and relevant Project technical requirements apply.

- The LMP establishes Project-wide worker categories, labor requirements, OHS principles, child and forced labor controls, Code of Conduct, incident reporting, and Worker Grievance Mechanism requirements.
- This Annex IV translates the relevant requirements into village-level instructions, posters, contact cards, registers, and checklists.
- Annex III ESCOPs provide additional activity-specific controls for civil works, roads, agroprocessing, solar and batteries, waste facilities, aquaculture and fisheries, coastal works, ecotourism, food security and irrigation, livestock and biogas, and productive equipment.
- Applicable Annex III ESCOP measures identified during E&S screening shall be included in the work briefing, design or contract/community agreement, operating instructions, and monitoring forms.
- Issues requiring specialist judgment shall be referred to district technical personnel, CPIU/PIU E&S focal points, CPMU E&S specialists, or other competent personnel.

3. Roles and Responsibilities for Village-Level OHS

Implementation of this procedure is a shared responsibility. The responsibilities below apply according to each party's role in the activity.

Party	Simplified OHS responsibilities
Village Government	Ensure this procedure is applied; designate the responsible TPK or site supervisor; ensure OHS resources are included in planning and budgeting; confirm serious incidents and unresolved issues are reported and escalated; and oversee corrective-action follow-up.
TPK / Site Supervisor	Conduct routine worksite supervision; identify daily hazards; provide pre-work briefings or toolbox talks; check PPE and site controls; maintain worker, training, inspection, incident and near-miss records; stop unsafe work where necessary; and follow up corrective actions.
Contractor / Service Provider	Provide safe working conditions, task-appropriate PPE, competent supervision, induction and training, safe tools and equipment, first aid and emergency arrangements, incident reporting, and OHS records. Remain responsible for workers and subcontractors.
Facilitator	Support explanation of OHS requirements, orientation, records and checklists, monitoring, identification of implementation gaps, and referral of issues requiring district or Project-level support.
Workers and Community Workers	Attend safety briefings; follow site rules and safety instructions; correctly use and care for PPE; use tools and equipment only when authorized and competent; report hazards, incidents, near misses and misconduct; and stop or move away from immediate and serious danger.
District Team / Technical and Supervision Personnel	Conduct risk-based spot checks; verify records against site conditions; provide technical guidance within their competence; require and verify corrective actions; and escalate significant incidents, repeated non-compliance, or technically complex issues to the relevant Project E&S or technical personnel.

Note. Assignment of duties to the Village Government, TPK, facilitator, or district team does not reduce the responsibility of contractors, service providers, suppliers, or other employers to provide safe and healthy working conditions for their workers.

4. Basic OHS Requirements

4.1 Plan the Work Safely

- Before work begins, identify the tasks, workers, location, tools, equipment, materials, and main hazards.
- Confirm the applicable Annex III ESCOP(s), technical safety requirements, permits, land/access conditions, and community-safety controls.
- Assign a responsible TPK member, site supervisor, or contractor supervisor.
- Include necessary PPE, first aid, barriers, signs, fire protection, spill controls, emergency equipment, and other safety costs in the activity budget or contract.

· Do not begin work where an exclusion, serious unresolved land/access issue, missing mandatory technical approval, or immediate safety danger is identified.

4.2 Minimum Site Controls

· Keep the work area orderly, adequately lit where needed, and free from unnecessary hazards.
· Secure excavations, unstable areas, moving machinery, electrical equipment, work at height, and other hazards from workers and the public.
· Provide safe access and temporary alternative routes where work affects normal movement.
· Keep first-aid supplies, drinking water, sanitation, shade or rest areas, and emergency contacts available as appropriate.
· Control dust, noise, vibration, smoke, odor, traffic, waste, wastewater, fuel, oil, chemicals, batteries, and other hazardous materials.
· Stop work during unsafe weather or site conditions, including flooding, lightning, strong winds, unstable slopes, dangerous heat exposure, or other imminent hazards.

4.3 Personal Protective Equipment

PPE shall be selected according to the task and provided by the responsible employer or implementing entity. Workers must receive instruction on correct use, storage, and replacement.

Hazard / activity	Typical minimum PPE	Additional control
General construction / manual work	Work shoes or boots; gloves; suitable work clothing	Helmet, eye, hearing or respiratory protection as required by the task.
Dust, cutting, grinding or processing	Eye protection; suitable mask/respiratory protection; gloves	Machine guards, ventilation, wet methods or enclosure.
Chemicals, fuel, pesticides, wastewater or biological material	Chemical-resistant gloves; boots; eye/face protection; suitable clothing	Labels, safe storage, hygiene/washing and spill controls.
Work at height	Helmet and appropriate fall protection	Safe platform/scaffold, anchorage and competent supervision.
Work over/near water	Life jacket or flotation device	Safe walkway, railings, rescue equipment and buddy system.
Electrical/solar/battery work	Task-appropriate insulated/protective equipment	Competent person, isolation, guarding, earthing and restricted access.

4.4 Heat, Weather, Water and Hygiene

· Provide adequate drinking water, shade and rest breaks.
· Adjust working hours and work/rest arrangements according to heat, workload, weather conditions, and worker condition.

· Provide basic washing and sanitation facilities appropriate to the activity.
· Workers handling food, animals, wastewater, waste, chemicals, pesticides, or biological materials shall follow activity-specific hygiene controls.
· Stop or postpone work when weather or environmental conditions make the activity unsafe.

5. Safety Briefing and Simple Site Check

Before work starts, the TPK, site supervisor, or contractor shall give workers a short safety briefing. Repeat the briefing when the work, equipment, or site conditions change.

5.1 Minimum Safety Briefing

· main hazards and how to avoid them;
· required PPE and safe use of tools or equipment;
· unsafe or restricted areas;
· first-aid location and emergency contacts;
· how to report an incident, unsafe condition, or worker complaint;
· any additional safety measure required by the applicable Annex III ESCOP.

Record only the date, topic, and names or signatures of participants using the simple form in Section 10.2.

5.2 Simple Site Check

· The TPK or site supervisor shall make a short site check before work and periodically during implementation.
· Check that workers use PPE, tools and equipment are safe, dangerous areas are secured, first aid and emergency contacts are available, and the site is orderly.
· If a problem can be corrected immediately, correct it and record the action.
· If there is immediate danger, stop the work and refer the issue to the Village Government, district team, or Project E&S/technical personnel, as appropriate.

6. Emergency Procedures

Simple rule: STOP – MAKE SAFE – HELP – CALL – REPORT – RECORD.

6.1 Before Work Starts

· Identify foreseeable emergencies, such as serious injury, fall, collapse, electrical shock, fire, fuel/chemical spill, gas leak, drowning, snake bite, extreme weather, equipment accident, or animal/biological incident.
· Confirm and display emergency contacts and the nearest Puskesmas or health facility.
· Identify and keep clear a safe access and evacuation route.
· Provide the required first-aid supplies and activity-specific emergency equipment, such as fire extinguishers, life rings, rescue ropes, or spill kits.

· Tell workers who will stop work, contact help, secure the area, provide trained first aid, and report the incident.

6.2 Emergency Action Steps

Step	Required action
1. STOP THE WORK	Stop immediately and keep people away from the danger area.
2. MAKE THE AREA SAFE	Switch off machinery, electricity, fuel or ignition sources only where safe. Do not enter unstable, electrical, gas-filled, flooded, confined or other dangerous spaces without appropriate training and equipment.
3. PROVIDE FIRST AID	A trained person should provide appropriate first aid. Do not attempt a medical procedure without training.
4. GET HELP	Contact the nearest Puskesmas, health facility, ambulance, fire service or designated local response contact.
5. REPORT	Immediately inform the TPK/site supervisor and Village Government. Escalate serious incidents through the Project procedure.
6. RECORD AND CORRECT	Record the incident or near miss, investigate as required, and complete corrective actions before resuming unsafe work.

6.3 Emergency Contact Card

Site/TPK contact	
Village Government	
Facilitator	
Nearest Puskesmas/health facility	
Ambulance/fire/emergency service, where available	
District/Project incident contact	

STOP-WORK RIGHT. A worker may stop work and move away from an immediate and serious danger to life or health. The worker must report the danger to the TPK or site supervisor. No worker shall be punished for reporting or avoiding such danger.

7. Incident and Near-Miss Reporting

All work-related accidents, injuries, illnesses, dangerous occurrences, near misses, fires, spills, electrical incidents, equipment incidents, and other OHS events shall be reported and recorded.

- Workers shall immediately report incidents and near misses to the TPK/site supervisor.
- The TPK/site supervisor shall provide or arrange immediate assistance, make the area safe, create the initial record, and inform the Village Government.
- Serious incidents shall be escalated immediately through the Project incident-reporting procedure without waiting for routine reporting.
- The responsible party shall identify the immediate and underlying causes, corrective actions, responsible person, due date, and closure evidence, proportionate to the incident.
- Near misses shall be recorded because they provide early warning of hazards.
- Sensitive SEA/SH details shall not be recorded in the general OHS log; use the confidential referral pathway.

8. Child Labor and Worker Protection

8.1 Minimum Age and Age Verification

> **Core rule:** No person below the Project's applicable minimum working age may be engaged. No person under 18 may perform hazardous work.

- Verify age before a worker starts and record completion in the worker register.
- Acceptable evidence may include a government identification document, family card, birth or school record, or other evidence accepted under the LMP.
- Handle identification documents securely. If age cannot be verified, the person shall not start work until verification is completed.

8.2 Hazardous Work Prohibited for Persons Under 18

Persons under 18 shall not undertake:

- construction, demolition, excavation, trenching or unstable-structure work;
- work at height, on roofs, scaffolds, towers, bridges, docks, embankments, or near deep water;
- operation, cleaning or repair of powered machinery, heavy equipment, cutting equipment, compactors, mills, pumps or moving parts;
- handling of pesticides, fuel, oil, batteries, refrigerants, chemicals, wastewater, waste or veterinary/medical waste;
- electrical, solar, biogas, gas, welding, fire, hot-surface or confined-space work;
- work involving large animals, carcasses, manure pits, fish cages, boats, drowning or significant biological hazards;
- heavy lifting, night work, isolated work, or other hazardous work identified in the LMP or relevant ESCOP.

If prohibited child labor is identified: Stop the work, remove the young person from the hazardous task, protect the person from harm and retaliation, notify the Village Government and relevant Project personnel, and apply the remedy/referral procedure in the LMP.

8.3 Voluntary Community Labor / Gotong Royong

- Participation must be voluntary. No person may be forced, pressured, threatened, or penalized for refusing to participate or withdrawing.
- Non-participation shall not result in loss of Project benefits, village services, or social standing.
- Before participating, community workers shall understand the work, working time, safety requirements, whether the work is paid or unpaid, and how to raise a grievance.
- The agreed community-work arrangements shall be documented in an appropriate village or community record.

8.4 Fair Treatment and Basic Working Conditions

- No discrimination, harassment, intimidation, bullying, forced labor, retention of identity documents, unlawful deduction, or retaliation.
- Explain wages or other agreed compensation, working hours, rest arrangements, duties and workplace rules before work starts.
- Provide reasonable access to water, sanitation, first aid, rest and the Worker Grievance Mechanism.
- Provide reasonable accommodation and safe task assignment for workers with disabilities or other specific needs, where applicable.

9. Worker Grievance Mechanism and Code of Conduct

9.1 Worker Grievance Mechanism

Workers may raise concerns about safety, wages, working hours, recruitment, discrimination, treatment, harassment, child or forced labor, Code of Conduct violations, or any other workplace issue. The Worker GRM is separate from the community grievance mechanism and shall follow the LMP.

Designated worker contact	Name/phone: _____
Alternative village/TPK contact	Name/phone: _____
Confidential or anonymous channel	_____
Contractor/service-provider channel, if applicable	_____
District/Project escalation channel	_____

- Complaints may be verbal or written and may be anonymous where the channel allows.
- Record and refer the complaint, explain the next step, and protect confidentiality.

· No retaliation is permitted for raising a complaint in good faith.
· Inform the worker of the outcome, subject to confidentiality and applicable procedures.
· Escalate unresolved or serious grievances in accordance with the LMP.
· Refer SEA/SH and other sensitive complaints immediately through the designated confidential pathway. Do not include detailed personal or incident information in the general log.

9.2 Simplified Code of Conduct

Applies to everyone: All workers, TPK members, contractors, service providers, facilitators, operators, and community workers shall follow these rules. Where a formal signed Code of Conduct is required, this simplified version supplements rather than replaces it.

I will:

· follow safety instructions and use required PPE;
· use tools, equipment, vehicles, fuel, chemicals and Project property only for authorized work;
· report hazards, incidents, near misses, damaged equipment and misconduct;
· treat workers and community members with dignity and respect;
· respect local customs, community property, privacy and access arrangements;
· protect the environment and follow applicable ESCOPs;
· use the Worker GRM when I have a workplace concern.

I will not:

· discriminate, bully, intimidate, threaten, fight or harass;
· engage in sexual exploitation, abuse, sexual harassment, or request favors in exchange for employment, pay or Project benefits;
· use or be under the influence of illegal drugs or alcohol during Project work;
· bring children into hazardous work areas or assign prohibited work to anyone under 18;
· force, pressure or penalize a person for refusing community labor;
· steal, misuse, sell or intentionally damage Project assets, materials, equipment or funds;
· pollute water, soil or air, harm wildlife/cultural heritage, or ignore applicable ESCOP requirements;
· retaliate against anyone who reports a concern.

Consequences. Violations shall be addressed through applicable disciplinary and corrective-action procedures. Serious misconduct may result in removal from the site, termination of engagement, Project referral, or referral to competent authorities, as applicable.

10. Monitoring Forms and Poster

Use only the minimum forms below. The forms may be integrated into the village progress report or digital monitoring system, provided the same information is retained.

10.1 Pre-Start OHS Readiness Checklist

No.	Readiness check	Y/N/N.A.	Action if not ready
1	Responsible TPK/site supervisor designated	☐ Y ☐ N ☐ N/A	
2	Main hazards and applicable ESCOP identified	☐ Y ☐ N ☐ N/A	
3	Worker list and age checks completed	☐ Y ☐ N ☐ N/A	
4	Required PPE, first aid and emergency contacts available	☐ Y ☐ N ☐ N/A	
5	Worker GRM and Code of Conduct explained	☐ Y ☐ N ☐ N/A	
6	Required permit, design or technical approval available, where applicable	☐ Y ☐ N ☐ N/A	

10.2 Safety Briefing Record

Date / activity	Main safety topics	Worker name	Signature / mark

10.3 Simple Site Monitoring Checklist

No.	Check	Y	N/N.A.	Issue / action
1	Workers were briefed and use required PPE	☐	☐ N ☐ N/A	
2	Tools, machinery and electrical equipment are safe	☐	☐ N ☐ N/A	
3	Dangerous areas are secured from workers and the public	☐	☐ N ☐ N/A	
4	First aid, drinking water and emergency contacts are available	☐	☐ N ☐ N/A	
5	Waste, spills, dust/noise and hazardous materials are controlled	☐	☐ N ☐ N/A	
6	No unreported incident, child labor, forced labor, harassment, or serious worker complaint	☐	☐ N ☐ N/A	

No.	Check	Y	N/N.A.	Issue / action
7	Previous corrective actions are completed	☐	☐ N ☐ N/A	
8	Applicable Annex III ESCOP safety measures are followed	☐	☐ N ☐ N/A	

10.4 Village OHS Incident, Notification and Corrective-Action Log

Use this log for: injuries, work-related illness, near misses, fires, spills, electrical or equipment incidents, and other OHS events. Do not record sensitive SEA/SH details here.

Village / district		Activity / site	
Implementer / contractor		Log maintained by	
Reporting period		Last updated	

No.	Date / event type	What happened / person affected	Immediate action / referral	Corrective action / responsible / due date	Status / closure date

Event type: ☐ Near miss ☐ First aid ☐ Medical treatment ☐ Serious injury/fatality ☐ Fire/spill/electrical/equipment ☐ Other: _____

Serious incident escalated? ☐ No ☐ Yes. Reported to: _____ Date/time: _____

Minimum rule. Make the area safe, provide or obtain help, record the event, escalate serious incidents immediately, and close corrective actions with simple evidence.

10.5 One-Page Site Poster: Work Safely and Respectfully

BEFORE WORK Attend the safety briefing. Know the hazards, required PPE, first-aid location, emergency contacts, and Worker GRM channel.

DURING WORK Use PPE. Follow instructions. Keep children and community members away from hazards. Use tools and equipment safely.

STOP UNSAFE WORK Move away from immediate and serious danger and report it. No retaliation is allowed.

REPORT Report accidents, near misses, unsafe conditions, damaged equipment, harassment, payment concerns, child labor, forced labor, or other workplace issues.

SHOW RESPECT No discrimination, intimidation, violence, sexual exploitation, abuse, sexual harassment, alcohol/drug use at work, theft, pollution, or retaliation.

EMERGENCY STOP – MAKE SAFE – HELP – CALL – REPORT – RECORD.

ANNEX V: Biodiversity Screening Identification/Procedure

How to use this Annex. This Annex explains how to check every SEHATI village investment for risks to nature (biodiversity) before it is approved, and what to do about those risks.

- **Village facilitators and village governments:** Parts 1 to 3, Form BIO Part BIO-2 (Appendix B) and the Wildlife Chance Find Procedure (Appendix E).
- **District Coordination Teams (DCT):** Parts 1 to 3 and Form BIO Part BIO-3.
- **CPMU and specialists:** the whole Annex, including Form BIO Parts BIO-1 and BIO-4 and Appendices C, D and G.
- Technical words are explained in Section 5. The laws and World Bank standards behind this Procedure are in Section 3.

PART 1 – INTRODUCTION AND OVERVIEW

1. What this Procedure is for

This Biodiversity Screening Procedure (BSP) explains how SEHATI finds, avoids and manages risks to biodiversity: the plants, animals and natural places such as forests, mangroves, rivers and reefs on which people and wildlife depend. It aims to: (i) find sensitive places and activities early; (ii) identify possible impacts on protected areas, natural and critical habitat and important species; (iii) apply the mitigation hierarchy; (iv) decide when further assessment or a specialist is needed; and (v) give a written basis for approving, conditioning or rejecting each activity.

The Procedure is part of the Project Environmental and Social Management Framework (ESMF). Everyone who prepares, checks, approves, carries out or supervises a SEHATI investment must follow it. It puts into effect Environmental and Social Commitment Plan (ESCP) Action 1.1, which requires the ESMF to include biodiversity screening, and ESCP Action 6.1 on biodiversity conservation and the sustainable management of living natural resources.

Most SEHATI investments are small, but risks can arise from **where** an activity is built (forests, conservation areas, mangroves, peat, karst, rivers, coasts), **what** it does (aquaculture, fisheries, ecotourism, taking water, check dams, new roads, works in remote areas), **what it brings in** (stock, seeds, fodder, soil or equipment carrying invasive species), and **how many** similar activities share the same river, coast or forest. The Procedure works by checking early and **avoiding** harm, mainly by choosing a better site or design, rather than repairing damage later.

The Project's overall environmental and social risk is Substantial. Biodiversity risk is rated Moderate only if the exclusions in Appendix A are applied without exception and Step 1 (Section 7) is completed before villages start preparing proposals. If either condition is not met, biodiversity risk must be re-rated as Substantial.

1.1 When the Procedure applies

It applies to every SEHATI-supported activity that may affect plants, animals, natural habitats, living natural resources or the benefits people get from nature, in all five packages: Food Security, Green Agroprocessing, Green Ecotourism, Aquaculture and Fisheries, and Livestock. It also applies to digital

connectivity infrastructure; to technical assistance, training, guidelines and studies that may affect land use or natural resources; and to **Associated Facilities** (Section 13.8).

- Screen the **whole investment** together, including roads, water supply, power lines and equipment. Where it serves more than one village, screen the full footprint and every village affected.
- Screening starts at the Musyawarah Desa and the village investment plan, and the Procedure applies through approval, construction, operation and maintenance.
- Screen (again) whenever: a new activity or site is proposed; an asset is expanded, rehabilitated or modified with a larger footprint; vegetation will be cleared or natural land converted; the site is in or near a protected or sensitive area; the activity may affect forests, wetlands, mangroves, coral reefs, seagrass, rivers, threatened, protected, endemic or migratory species, water flow, groundwater or the benefits people get from nature; or the activity involves coastal or marine works, or taking or discharging water.

1.2 Seven rules to remember

1. **Screen before you design.** Check the site before the village spends effort on a design that may be refused.
2. **Avoid first.** Moving or redesigning an activity is almost always better than repairing damage.
3. **The exclusion list cannot be waived.** No village or district may approve an activity on the Biodiversity Exclusion List (Appendix A).
4. **If in doubt, choose the higher category.** Uncertainty is sent upwards, never settled downwards at village level.
5. **What you see on the ground counts more than the map.** A mangrove, forest patch or spring found in the field raises the category even if no map shows it.
6. **No decision that cannot be undone on incomplete information.** Until the facts are known: no approval, land clearing, contracting of works or mobilization.
7. **Keep the record.** Every screening, exclusion, alternative and decision is written down and kept, including activities that were refused.

2. Responsible Party

Who	What they do	Output
CPMU Environmental Specialist (Ministry of Villages and Development of Disadvantaged Regions (MoVDA))	Owns this Procedure. Carries out Step 1 (Form BIO, Part BIO-1) and keeps the Village Biodiversity Sensitivity Register up to date. Reviews and clears Category C activities. Keeps biodiversity monitoring data, reports to the World Bank and designs the training.	Register; Parts BIO-1 and BIO-4; reports
CPIU / PIU E&S Focal Points	Write biodiversity requirements into technical guidelines, procurement documents and contracts, especially for equipment and connectivity infrastructure.	Clauses in guidelines, TOR and contracts
District Coordination Team (DCT)	Checks the village screening, visits sites, looks for combined effects within the district, and refers Category C activities to the CPMU.	Part BIO-3; site visit records

Who	What they do	Output
Village facilitator	Completes Part BIO-2 at the site with the village government and community, explains the exclusions and helps prepare the measures.	Part BIO-2 with GPS and photos
Village government	Signs Part BIO-2; makes sure the agreed measures are carried out, funded and maintained.	Measures funded and carried out
Contractors and service providers	Follow the biodiversity clauses in their contracts: Codes of Conduct, Wildlife Chance Find Procedure, invasive species controls.	Compliance and incident records
Sectoral Technical Coordination Forum and authorities	Give advice, regulatory and map information, and the consultation required for Category C: BKSDA (Balai Konservasi Sumber Daya Alam, the provincial conservation agency), national park offices, marine and fisheries services, provincial and district agencies.	Consultation records
External biodiversity specialist	Prepares Biodiversity Management Plans and Critical Habitat Assessments, advises on species and habitats, supports training. Engaged by the CPMU or the district.	BMP, CHA or specialist assessment

These roles follow the ESMF and the Project Operations Manual (POM). If the final arrangements differ, read each responsibility against the equivalent role and update this table at the next revision.

3. Legal basis

3.1 World Bank Environmental and Social Standard 6 (ESS6)

ESS6 recognizes that protecting biodiversity and managing living natural resources sustainably are fundamental to sustainable development. Its core requirements, as applied in this Procedure, are to:

- assess biodiversity risks in proportion to their significance, following Good International Industry Practice, using desktop review, expert consultation and field checks, without counting on possible offsets (paragraphs 10–12);
- apply the mitigation hierarchy: avoid, minimize and restore, with offsets only as a last resort where significant residual impacts remain (paragraphs 9 and 15–18);
- classify affected areas as modified, natural or critical habitat and apply the rules for each; modified habitat with significant biodiversity value is still covered (paragraphs 14 and 19–25, in particular 20);
- in natural habitat, proceed only where there is no technically and financially feasible alternative and mitigation achieves no net loss and, where feasible, a net gain over the long term (paragraph 22);
- in critical habitat, proceed only if every condition in paragraph 24 is met, including net gains in the values for which the habitat is critical, with the mitigation strategy in a Biodiversity Management Plan reflected in the legal agreement, including the ESCP (paragraphs 24–25); and
- meet the requirements on legally protected and internationally recognized areas, invasive alien species, sustainable management of living natural resources and primary suppliers (paragraphs 26–40).

3.2 IFC Performance Standard 6

IFC PS6 (2012) and Guidance Note 6 (2019) apply to private sector operations and do not bind the Borrower. This Procedure uses them only as the reference for the numerical thresholds for critical habitat (Appendix G), because they can be tested in practice and underpin the international screening datasets (Appendix C). The IFC Sustainability Framework is under review; the CPMU confirms the current version whenever a Critical Habitat Assessment is commissioned.

3.3 Indonesian law

Where national requirements and ESS6 differ, the stricter rule applies. Every year, and whenever a relevant regulation is issued or amended, the CPMU confirms with the Ministry of Environment and the Ministry of Forestry the status of the regulations below, the custodian of each map layer in Appendix C and the right consultation counterpart for each type of conservation area.

Regulation	What it covers	Why it matters for screening
Law No. 5/1990 on Conservation of Biological Natural Resources and their Ecosystems, as amended by Law No. 32/2024	Conservation areas (KSA/KPA) and species protection; bans taking, harming and trading protected species	Basis of X1, X9 and X17; sets which authority manages a conservation area
Law No. 41/1999 on Forestry, as amended	Forest Area (conservation, protection, production forest); use of forest area	Basis of X2 and X3; shows whether a site is in Kawasan Hutan
Law No. 32/2009 on Environmental Protection and Management, as amended	Environmental approval and impact assessment	Basis of X6; decides whether AMDAL or UKL-UPL applies
Law No. 11/2020 on Job Creation and Law No. 6/2023	Risk-based business licensing; changes to environmental and forestry rules	Sets the current licensing path and form of environmental approval
Government Regulation No. 22/2021	Environmental approval; AMDAL, UKL-UPL and SPPL criteria; technical approvals	Sets the environmental instrument an investment needs
Government Regulation No. 23/2021 on Forestry Administration	Forest area use and release, social forestry, forest protection	Shows whether a PPKH would be needed (X3); basis for community forestry links
Government Regulation No. 7/1999 on Preservation of Flora and Fauna	Protection of plant and animal species	Supports X9 and the Wildlife Chance Find Procedure
Minister of Environment and Forestry Regulation No. P.106/MENLHK/SETJEN/KUM.1/12/2018 (second amendment to P.20/MENLHK/SETJEN/KUM.1/6/2018; first amendment P.92/MENLHK/SETJEN/KUM.1/8/2018)	National list of protected plant and animal species	Reference list for X9; the CPMU confirms the current list at ESMF finalization
Ministerial regulations on Essential Ecosystem Areas (KEE)	Essential ecosystems and corridors outside conservation areas	Category C trigger and X19; sets the consultation counterpart

Regulation	What it covers	Why it matters for screening
Law No. 27/2007 on Coastal and Small Island Management, as amended, and Law No. 32/2014 on Marine Affairs	Coastal zoning, marine conservation areas, marine spatial conformity	Applies to coastal, mangrove, fisheries and aquaculture investments
Law No. 31/2004 on Fisheries, as amended	Fisheries management; ban on destructive fishing	Basis of X11
Law No. 26/2007 on Spatial Planning and its implementing regulations	RTRW and RDTR, spatial conformity (KKPR), kawasan lindung	Shows whether the site allocation permits the activity
Law No. 32/2009 (Articles 15–18); Government Regulation No. 46/2016 on Procedures for Conducting Strategic Environmental Assessment (KLHS); Minister of Environment and Forestry Regulation No. 13/2024 on its implementation	KLHS for provincial and district spatial plans (RTRW), development plans (RPJMD) and other policies, plans and programs: carrying capacity, ecosystem services, biodiversity, climate vulnerability	Source of information for the Village Biodiversity Sensitivity Register in Step 1 (Section 7)
Law No. 6/2014 on Villages, as amended by Law No. 3/2024	Village authority, planning and Village Funds	The village planning process into which screening fits
Regulations on timber legality (SVLK) and forest product administration	Legal origin of timber and forest products	Basis of the timber rule (Section 13.4) and X10
Minister of Forestry Regulation No. P.48/Menhut-II/2008 on human–wildlife conflict management, as amended by P.53/Menhut-II/2014; and Minister of Environment and Forestry Regulation No. 17/2024 on wildlife rescue (Penyelamatan Jenis Satwa), which revokes the 2008 regulation in so far as it covers wildlife rescue	Handling conflict between people and wildlife; rescuing wildlife	Basis of the rules in Section 13.10; the CPMU confirms which provisions remain in force
CITES, as implemented in Indonesian regulation	International trade in endangered species	Supports X9

3.4 Where Indonesian law and ESS6 differ

Indonesian law and ESS6 broadly share the same intent. Three differences matter in practice, and in each case this Procedure applies the stricter rule:

1. **Every activity is screened,** whatever its size and whatever national instrument applies, including works that need only an SPPL or no environmental document.
2. **Habitat is classified** as modified, natural or critical under ESS6 in addition to any national designation, so natural habitat outside designated areas is still treated as natural habitat.
3. **Critical habitat,** which has no direct equivalent in national law, is identified through Appendix G and treated in practice as an exclusion (Section 11.1).

4. Links to other Project instruments

Instrument	How it links to this Procedure
ESMF and Exclusion List (Annex I)	Activities are first checked against the Exclusion List, then Form BIO is completed alongside the E&S Screening Form (Annex II, items 1.6 to 1.9; ESMF Section 1.3, Steps 2 and 3). Appendix A adds to the Exclusion List (numbered 1–20); the last column of Appendix A shows the matching item.
Land Access Procedures	If a site is moved for biodiversity reasons, repeat the land access checks for the new site.
IPPF	Where nature values overlap with Masyarakat Adat land or resource use, screen together and hold one consultation.
Cultural Heritage Procedures	Sacred groves, trees, springs and hutan adat are screened under both; the more protective rule applies.
LMP	Codes of Conduct forbid workers from hunting, collecting or trading wildlife and from unauthorized clearing.
SEF and POM	Consultation with conservation authorities and forest-edge communities runs through the SEF; the steps, Form BIO and approval gate are built into the POM and the digital system.
ESCOP (ESMF Annex III)	Category A uses the ESCOP codes for the investment (ESCOP Part A, section 5); Category B applies them through a Simple ESMP. Fish passage and visitor carrying capacity come from this Procedure (Sections 13.5 and 13.6).

5. Key terms

Term	Meaning
Biodiversity	The variety of plants, animals and other living things, and the habitats and ecosystems they live in.
Modified / natural / critical habitat	See Section 17. In short: land people have already changed; areas where native nature still dominates; and areas of very high value for nature (SEHATI does not build in critical habitat).
Conservation area (KSA/KPA)	Cagar Alam, Suaka Margasatwa, Taman Nasional, Taman Hutan Raya, Taman Wisata Alam and Taman Buru; plus marine conservation areas (Kawasan Konservasi Perairan).
Protection forest / Forest Area	Hutan Lindung (state forest protecting water and soil) / Kawasan Hutan (land designated as state forest; using it needs a PPKH, which makes an activity ineligible, X3).
KBA, Ramsar site, ASEAN Heritage Park, KEE	Internationally or nationally recognized areas of high biodiversity value; KEE are essential ecosystems and corridors outside conservation areas.
PIPPIB, KHG, KBAK	The moratorium map of primary forest and peatland; peat hydrological units; protected karst landscapes.
Within 1 km (adjacent)	Within 1 km of the boundary of the area concerned (Section 17).

Term	Meaning
Footprint / right-of-way	All land an activity uses, including access, stockpiles, borrow areas and temporary works / the strip already used by an existing road, canal or pipe.
Mature tree	A tree with a trunk diameter of 20 cm or more at chest height (about 1.3 m above the ground).
Invasive alien species	A plant or animal from elsewhere that spreads and harms local nature.
Mitigation hierarchy / offset	Avoid, reduce, restore, and offset only as a last resort (Section 12).
No net loss / net gain	After all measures, nature is at least as well off / better off than before.
Ecosystem services	Benefits people get from nature: food, water, fuel, materials, flood and erosion protection, pollination, cultural value.
Nature-based solutions (NbS)	Using nature, such as mangroves, riverbank vegetation, trees or wetlands, to solve a problem like erosion, flooding or polluted water (Section 13.11).
Associated Facility	A facility not financed by the Project but needed for a Project activity to work (ESS1; Section 13.8).
ESCOP / Simple ESMP / BMP / CHA	Standard measures for village works (ESMF Annex III) / short mitigation plan for Category B / Biodiversity Management Plan for Category C (Appendix D) / Critical Habitat Assessment (Appendix G).
Sensitivity Register / Flag	The CPMU list of participating villages, each flagged A, B or C (Section 7).

6. The process at a glance

No village investment may be approved, and no money paid out for it, until the screening steps that apply to it have been completed and recorded. Figure V-1 shows the whole process.

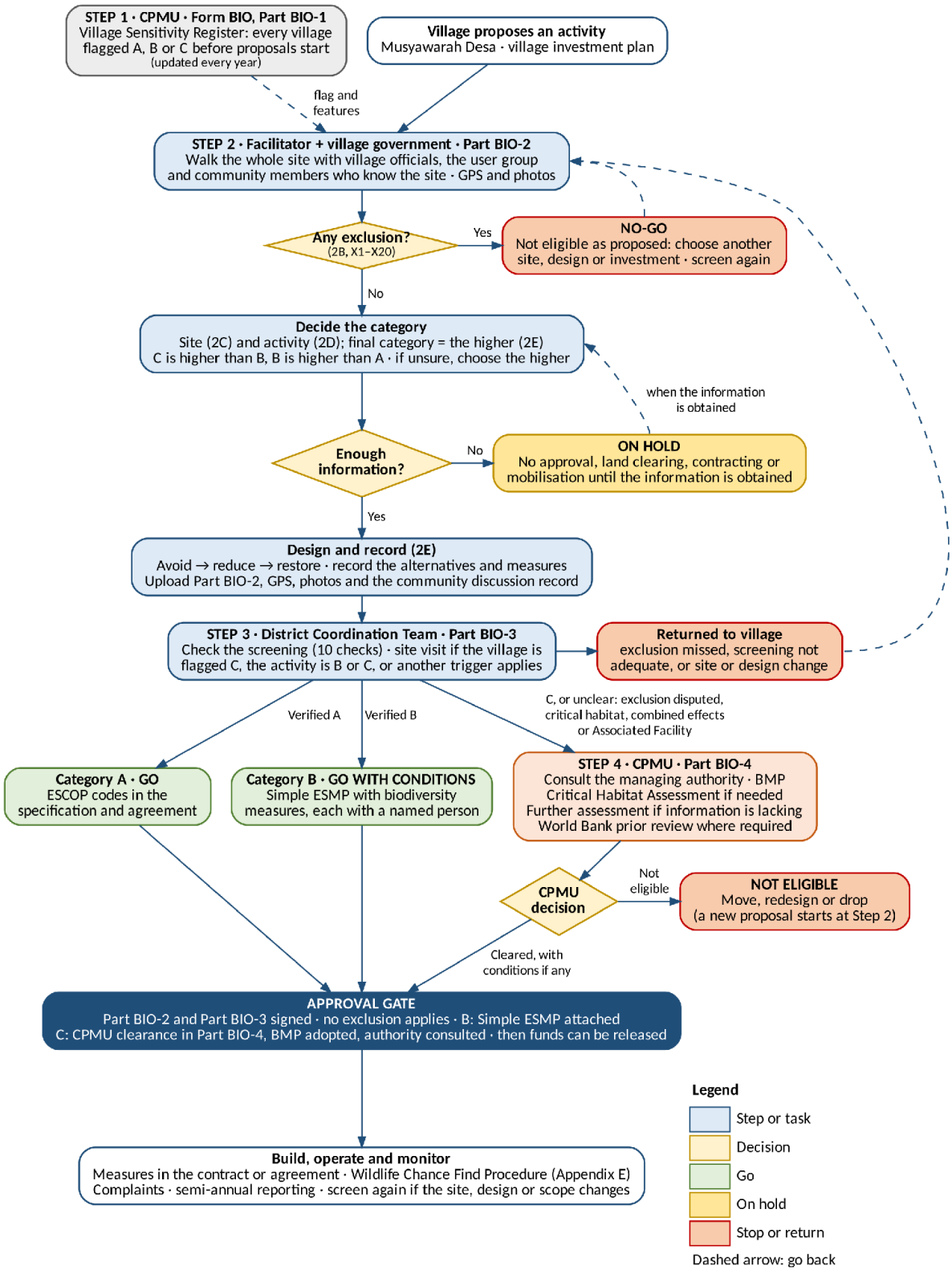


Figure V-1. Biodiversity screening flowchart

Step	Who	When	Record
Step 1 (Section 7)	CPMU environmental specialist, with GIS support	Before villages prepare proposals; updated every year	Village Biodiversity Sensitivity Register; Form BIO, Part BIO-1
Step 2 (Section 8)	Village facilitator with the village government, supported by BUM Desa (Badan Usaha Milik Desa) and women's and youth groups	While the village investment plan and proposal are prepared	Form BIO, Part BIO-2
Step 3 (Section 9)	District Coordination Team	District appraisal, before approval	Form BIO, Part BIO-3
Step 4 (Section 10)	CPMU; external specialist and World Bank review where required	Before final approval of a Category C or disputed activity	Form BIO, Part BIO-4

6.1 The approval gate

The district may not verify a village investment plan, and the CPMU may not approve an activity for financing, unless:

1. Part BIO-2 of Form BIO has been completed and signed for the activity;
2. Part BIO-3 has been completed and signed by the DCT;
3. for Category B, the Simple ESMP with biodiversity measures is attached to the proposal;
4. for Category C, the CPMU has given written clearance in Part BIO-4 and, where required, the Biodiversity Management Plan has been adopted and the conservation authority consulted; and
5. the activity is confirmed not to be on the Biodiversity Exclusion List (Appendix A).

PART 2 – STEP BY STEP

7. Step 1 – How sensitive is each village? (CPMU)

Step 1 is a desk exercise done once by the CPMU before villages start preparing proposals and refreshed every year. It turns national map data into a simple answer for each village, so facilitators and district teams can use it without GIS skills. It is required under ESCP Action 6.1 and is part of the screening system that ESCP Actions 1.1 and 1.2 require to be working before village proposal development begins.

How the CPMU does it:

1. Collect the boundaries of all participating villages (*batas desa*); where official boundaries are not gazetted, use boundaries mapped by the village.
2. Overlay the map layers in Appendix C, using the latest official versions.
3. Check the Strategic Environmental Assessment (KLHS) of the province and the district, prepared for the spatial plan (RTRW) and the medium-term development plan (RPJMD) under Law No. 32/2009 and GR No. 46/2016. Where the KLHS shows natural habitat, a wildlife corridor or another area of high biodiversity value that the map layers miss, apply Table V-1 to it as to any

mapped feature. Where it shows that the carrying capacity for water or land is already exceeded, note this in the Register so that the DCT takes it into account in the cumulative impact check (ESMF Section 5.3). Record which KLHS documents were used and their dates.

4. For each village, record any overlap with each sensitive feature, the shortest distance to it, and the share of the village in each land-cover class.
5. **Give each village a Sensitivity Flag using Table V-1 (where the criteria of more than one flag apply, the village takes the highest flag: C is higher than B, and B is higher than A)**, and record which features triggered it and the authority that manages each feature (Balai Taman Nasional, BKSDA, DLH (Dinas Lingkungan Hidup) or the fisheries authority).
6. Issue the Village Biodiversity Sensitivity Register (one row per village) with a map sheet for each district to all district teams and facilitators. Record the flag of each village in Form BIO, Part BIO-1, which the facilitator copies into Part BIO-2 for each activity.

Table V-1. Village Sensitivity Flags

Flag	The village gets this flag if any one of these applies	What it means
C / High	The village overlaps, or lies within 1 km of: a conservation area (KSA/KPA: Cagar Alam, Suaka Margasatwa, Taman Nasional, Taman Hutan Raya, Taman Wisata Alam, Taman Buru) or marine conservation area; protection forest (Hutan Lindung); a Key Biodiversity Area, Important Bird and Biodiversity Area, Ramsar site, ASEAN Heritage Park or World Heritage property; the UNEP-WCMC Global Critical Habitat Screening Layer; an Essential Ecosystem Area (KEE) or wildlife corridor. **Or** it contains mapped mangrove, peat hydrological unit (KHG), protected karst (KBAK), coral reef, seagrass, or primary or secondary natural forest, or falls within the PIPPIB moratorium map.	Every activity needs Step 2 with a site visit. Any activity with a new footprint outside the settlement goes to the CPMU (Step 4).
B / Moderate	The village lies 1–5 km from any Flag C feature; or contains other natural habitat (river-bank vegetation, natural lakes and swamps, estuaries, remnant forest, turtle-nesting beaches); or is in a KPP (Kawasan Perdesaan Prioritas) cluster where several villages share one river, coast or forest block.	Standard screening. Site visit for any new footprint or works near water or natural vegetation.
A / Low	The whole village is modified land (settlement, sawah, dryland farms, plantation, existing ponds) and more than 5 km from every Flag C feature.	Standard screening. ESCOP (ESMF Annex III) applies to all works.

The 1 km rule for a village flagged C. The 1 km is measured from the protected area boundary to the **activity site**, not to the village boundary. Physical works can go ahead where the site itself is more than 1 km from the boundary, confirmed by GPS in Part BIO-2. Where the whole village lies inside the band, only non-physical activities remain possible; the Register records whether any part of each C village lies outside it.

The flag sets **how carefully** to screen. It does not set the category of an activity, which is decided at Step 2 for the actual site.

Limits of the Register (to be written in the Register and explained in training): village boundaries are often not gazetted, so where a boundary is uncertain the higher category applies; global layers such as the critical habitat layer and KBAs only show where to look more closely, and only a Critical Habitat Assessment can prove critical habitat; and maps go out of date, so the CPMU refreshes the Register every year and whenever it learns of a significant change.

Field evidence wins. Where a facilitator finds something the Register missed, the category is raised on that observation alone, and the CPMU corrects the Register. Exclusions are decided from the GPS coordinates of the site in Part BIO-2, checked by the DCT. A category may be **lowered**, or a flagged exclusion set aside, only on documented evidence of the official boundary (gazettement decision or written confirmation from the managing authority) and only by written CPMU decision.

8. Step 2 – Screening the activity at the site (Part BIO-2)

8.1 Who, when and where

The village facilitator completes Part BIO-2 of Form BIO with the village government, **for each activity, at the proposed site**, while the village investment plan is prepared and before district verification. The facilitator must walk the site. At least these people take part: a village government representative (the Kepala Desa or Sekretaris Desa, or the Kasi Kesejahteraan or Kaur Perencanaan) and the Kepala Dusun (or equivalent) of the hamlet where the site is; a member of the BPD; the head of the group that will use or manage the asset (BUM Desa, or the women's, youth, farmer or fisher group); and at least two community members who know the site well (for example farmers, fishers or people who collect forest or coastal products). In a Masyarakat Adat community, screen together with the IPPF screening and the customary institutions (the ketua adat or a representative).

8.2 What to find out

Before the visit, check the village's flag in Form BIO, Part BIO-1, and collect the activity details: location, current land use, description, footprint, construction method, water use, waste and wastewater, access routes and temporary facilities. At the site, record:

1. **The exact site:** GPS of every corner (or the start and end of a road, pipe or channel) and geotagged photos in four directions.
2. **What is there:** land cover, vegetation, mature trees, water, wetland, mangrove, signs of wildlife; and whether the site is mainly modified, natural or possibly critical habitat (Section 17).
3. **What the community knows and uses:** threatened, protected, endemic, migratory or other notable species, and other important ecological features; fishing, hunting, collecting, grazing or medicinal plants; customary rules or sacred sites; flooding, spawning or nesting. These are the benefits people get from the site, which the Project must not reduce.
4. **Distance to sensitive features,** from the Register and checked on the ground.
5. **Whether any exclusion applies.**

8.3 First check the exclusion list

Answer every question in section 2B of Form BIO. **A single "Yes" means the activity cannot go ahead as proposed.** Record it, tell the village government straight away, help the village find another site or another investment from the positive list, and screen the new proposal again. Keep the original record: it shows the exclusion worked.

8.4 Then decide the category

Only when every exclusion answer is "No", decide the category with Table V-2. The final category is the **higher** of how sensitive the actual site is and how sensitive the type of activity is (Table V-3). Where more than one category applies, the highest is used: C is higher than B, and B is higher than A. It is decided at the works site, not at the village center: a village flagged C can have a Category A activity (such as repairing a building in the settlement), and a village flagged A can have a Category C one (such as a check dam on a natural stream).

Work through the questions in order and stop at the first "Yes". Form BIO repeats these rules: section 2C shows the Table V-2 category next to each site question, section 2D shows the Table V-3 category next to each type of activity, and section 2E records the final category.

Table V-2. Deciding the category of an activity

Question	If YES	If NO
Q1. Is the site inside, or within 1 km of, a Key Biodiversity Area, Ramsar site or ASEAN Heritage Park, or inside mapped mangrove, peat, karst, coral or seagrass?	**Category C.** Step 4 (CPMU). BMP and consultation with the responsible authority required.	Go to Q2.
Q2. Is the activity itself high-risk (Table V-3): new footprint in natural habitat, new road alignment, damming or diverting a natural stream or a structure across it, ecotourism access, aquaculture near coastal wetland, new tower site, or clearing over 0.25 ha or more than five mature trees?	**Category C.** Step 4.	Go to Q3.
Q3. Is the site 1–5 km from a conservation area, protection forest or any Q1 feature; **or** within 1 km of mapped mangrove, peat, karst, coral or seagrass; **or** does the village contain natural habitat (river-bank vegetation, natural wetland, remnant forest, estuary, nesting beach); **or** does the activity involve works within 50 m of a natural stream or wetland, earthworks over 500 m³, a new borrow pit, or new plant or animal species?	**Category B.** Simple ESMP with biodiversity measures, drawing on the ESCOP. District site visit required.	Go to Q4.
Q4. Is the site modified land with important value for nature (mature or hollow trees, sacred grove, village pond or paddy used by waterbirds, spring, established agroforestry)? **Or** would the activity reduce people's access to, or use of, a natural resource (water, fishing, forest or coastal products, grazing, medicinal plants)?	**At least Category B.** Keep the feature and people's access in the design; if not possible, refer to the DCT.	Go to Q5.
Q5. Is the activity entirely within modified land (settlement, farmland, plantation, existing ponds, existing footprint or right-of-way) and more than 5 km from a conservation area, protection forest or any Q1 feature?	**Category A.** Apply the ESCOP codes for the investment (package table, ESCOP Part A, section 5).	**Category B;** refer to the DCT.

Table V-3. How sensitive is the type of activity?

Sensitivity	Type of activity
High (C)	New footprint on land not already settled, farmed or built on; new road or track alignment outside an existing right-of-way; damming or diverting a natural stream, or a structure across it (check dams, weirs, retention ponds on natural streams); ecotourism facilities, trails, platforms or jetties giving access to natural habitat; aquaculture or fisheries facilities in or next to mangrove, estuary or coastal wetland; a new telecommunication tower outside the settlement, with its access track and power supply; clearing more than 0.25 ha or felling more than five mature trees.
Moderate (B)	Works within 50 m of a natural stream, spring, lake, wetland, mangrove or forest edge; pump or intake on a natural stream without a structure across it; earthworks over 500 m^3; a new borrow source for sand, gravel or stone; plant or animal species not already established in the village; permanent outdoor lighting near natural habitat; solid waste or wastewater facilities discharging towards a stream or the sea.
Low (A)	Rehabilitation or upgrading within an existing footprint; works entirely within settlement or farmland; tools, machinery and equipment (subject to Sections 13.1 and 13.4); training, studies and digital services.

No decision that cannot be undone on incomplete information (ESS6 paragraph 11). If the information is not enough to decide the category or how serious an impact is, the proposal is put on hold: no approval, land clearing, contracting of works or mobilization until the missing information is obtained. It is not approved with conditions.

8.5 Design, record and upload

Before the proposal is finalized, apply **avoid, reduce, restore** (Section 12) to the design, and record the alternatives considered and the measures chosen in section 2E of Form BIO. Upload Part BIO-2, GPS, photographs and the record of the community discussion to the Project digital system and attach them to the proposal. Keep copies in the village office and make them available on request, in line with the Stakeholder Engagement Framework (SEF).

9. Step 3 – District verification (Part BIO-3)

The DCT **checks** the village screening; it does not repeat it. It confirms that the screening was really done at the site, that the answers agree with the district's knowledge and the Register, and that the category and instrument are correct. It works through the ten checks in Part BIO-3.

The DCT must visit the site if: the village is flagged C; the activity is Category B or C; the activity involves a new footprint outside the settlement, a new road alignment, a water structure on a natural stream, an ecotourism facility, an aquaculture facility or a telecommunication tower; Part BIO-2 records protected species, mangrove, peat, karst, natural forest or wetland; the photographs do not match the answers; or someone has complained or asked about the site. Where the information shows moderate or high sensitivity, or is not enough, the check is done by suitably qualified staff.

Outcomes: verified as Category A; verified as Category B with the measures listed; referred to the CPMU as Category C; or returned to the village (exclusion applies, screening not adequate, or site or design must change). The responsible DCT member signs Part BIO-3 and uploads it.

10. Step 4 – CPMU review (Part BIO-4)

10.1 When and what

Step 4 is needed for every Category C activity, and for any activity where an exclusion may apply or is disputed, critical habitat or another highly sensitive area may be affected, significant combined effects are possible, or more information or consultation is needed. The CPMU reviews the screening and decides whether the activity can go ahead. Before clearance it may ask for a Biodiversity Management Plan, a Critical Habitat Assessment, a specialist assessment, a field survey or consultation with the authority. It records the decision, conditions, consultation and World Bank review in Part BIO-4.

10.2 Consulting conservation authorities

For every Category C activity, the CPMU or the DCT must consult the authority that manages the feature concerned before clearance. Where it is unclear which authority is responsible, or several sectors are involved, the CPMU raises it at the Sectoral Communication Forum, chaired by MoVDA with the Ministries of Environment, Forestry, Marine Affairs and Fisheries, Agriculture, Public Works and Tourism and the disaster management agency. The usual counterparts are:

Feature	Authority to consult
National Park (Taman Nasional)	Balai Besar / Balai Taman Nasional
Cagar Alam, Suaka Margasatwa, Taman Wisata Alam, Taman Buru	BKSDA
Taman Hutan Raya	Provincial or district government, whichever manages the park (UPT or UPTD Tahura)
Protection forest and other Forest Area	Ministry of Forestry, through the KPH (Forest Management Unit) and provincial forestry service
Marine conservation areas, mangroves, coral reefs, seagrass	Ministry of Marine Affairs and Fisheries; provincial Dinas Kelautan dan Perikanan
Peat hydrological units	Ministry of Environment and the provincial environment agency
Essential Ecosystem Areas (KEE) and wildlife outside conservation areas	BKSDA and provincial DLH
Environmental approval and technical approvals	Ministry of Environment, or provincial or district DLH

Record who was consulted, when, what they advised and how it was used, and attach the record to the BMP and Form BIO.

Supporting the area's conservation aims (ESS6 paragraph 27). Where a Category C activity lies within 1 km of a Key Biodiversity Area, Ramsar site, ASEAN Heritage Park or KEE, its BMP must include at least one modest measure, agreed with the managing authority, that supports the area's management aims: for example joining its community partnership, boundary marking or signs, village rules against encroachment or hunting, joint awareness activities, or a buffer planting of local native species. The measure is costed and monitored.

10.3 World Bank review

The CPMU sends to the World Bank for prior review: the first three BMPs; any BMP for an activity within 1 km of a Key Biodiversity Area, Ramsar site or ASEAN Heritage Park; any proposed biodiversity offset; any proposed Critical Habitat Assessment; and any proposed departure from this Procedure. The Bank may then set a threshold for post review, recorded in the POM.

11. What each category requires

Every activity gets a category: **A (low)**, **B (moderate)** or **C (high)**. Where more than one flag or category applies, the highest is used: C is higher than B, and B is higher than A. The village flag (Step 1) uses the same letters but only shows how sensitive the village is. These categories are a management tool of this Procedure, not the Project's risk classification under the World Bank Environmental and Social Framework (ESF).

Category and decision	Typical situation	What must be in place (prepared by / cleared by)
A – GO	Land already modified; no sensitive habitat or species; small footprint.	ESCOP codes for the investment written into the works specification and contract or community agreement; no separate document (facilitator / DCT in Part BIO-3).
B – GO WITH CONDITIONS	Natural habitat, a sensitive ecosystem or sensitive species may be present; impacts can probably be managed.	Simple ESMP with the biodiversity measures for the activity, drawn from the ESCOP, each with a named person responsible and a monitoring entry (facilitator with village government, supported by DCT / DCT in Part BIO-3).
C – FURTHER ASSESSMENT	Natural habitat of significant value, an activity next to a protected area, threatened species, or major disturbance.	Biodiversity Management Plan following Appendix D (qualified specialist engaged by CPMU or district, with the conservation authority / CPMU in writing in Part BIO-4, with World Bank prior review where required).
NO-GO	On the Exclusion List (Appendix A), or cannot meet Section 11.1.	Move, redesign or drop the activity.

Two biodiversity requirements are not in the ESCOP and must be added from this Procedure where they apply: fish passage (Section 13.6), and a documented visitor carrying capacity assessment for ecotourism near sensitive areas (Section 13.5 and X15). ESCOP 8 sets only the general visitor limit agreed with the village.

11.1 Critical habitat: the Project will not build there

ESS6 paragraph 24 allows works in critical habitat only if strict conditions are all met, including: no viable alternative; no measurable net reduction in the values for which the habitat is critical or in the population of any Critically Endangered, Endangered or restricted-range species; no significant conversion or degradation; net gains; and long-term monitoring. A village-scale investment cannot realistically meet them, so **no activity will be located in critical habitat**. Where it may be affected, the activity is moved, redesigned or dropped. A Critical Habitat Assessment is commissioned only in the exceptional case in Appendix G.1, and there is no approval without World Bank clearance.

11.2 Biodiversity Management Plan (BMP)

A BMP is required for every Category C activity and wherever screening finds a significant risk. A qualified biodiversity specialist engaged by the CPMU or the district prepares it. It covers the biodiversity values, impacts, measures to avoid and reduce them, restoration, responsibilities, monitoring indicators, reporting frequency and corrective actions (outline in Appendix D).

11.3 Keeping decisions up to date

Screening results and measures are reviewed when new information appears: a chance find, a field observation that contradicts the Register, a complaint, a supervision finding, or a change in design or site (ESS6 paragraph 12). The CPMU reviews the Register every year and after any significant change in national map data, and reissues any decision whose category changes.

PART 3 – RULES FOR SPECIFIC SITUATIONS

12. Avoid, reduce, restore (the mitigation hierarchy)

The hierarchy is applied at Step 2 while the activity is designed, checked (not re-applied) by the DCT at Step 3, and applied again when the Simple ESMP or BMP is prepared.

Step	What it means in SEHATI	Evidence
1. Avoid	Put the activity outside natural habitat and away from sensitive features: another site, another alignment, or a different investment. This is the expected and most common answer.	Alternatives recorded in Form BIO; GPS of chosen and rejected options.
2. Reduce	Smaller footprint; work on already disturbed ground; limit clearing and tree felling; avoid breeding, nesting, spawning and migration seasons; control noise, dust, light and sediment; keep workers and machines out of nearby habitat.	Drawings and works specification; method statement; measures in the contract or community agreement.
3. Restore	At the end of works, replant disturbed areas with local native species from a local source; restore drainage and stream banks; remove all temporary works.	Reinstatement specification, species list, completion photos, defects liability period long enough for plants to establish.
4. Offset	Only as a last resort, if a significant harmful impact remains after steps 1–3 (ESS6 paragraph 15), and only if every condition below is met. Otherwise the activity does not go ahead.	Offset design, additionality, like-for-like analysis, long-term management and funding, monitoring, CPMU and World Bank clearance.

Offset conditions (ESCP Action 6.1 allows offsets, but all of these must be met and documented in the BMP):

- **Last resort** (ESS6 paragraph 15): an offset may not replace moving an activity that could be moved.
- **Measurable, additional and long-term** (paragraph 16): the gain is measured, would not have happened anyway, and lasts; the result is no net loss, and a net gain where critical habitat is affected.

- **Like-for-like or better** (paragraph 16): it protects the same kind of nature that is harmed; "trading up" only where justified and agreed.
- **Designed with stakeholders and experts** (paragraph 17): affected communities, resource users, the conservation authority and specialists take part; in critical habitat, independent internationally recognized specialists confirm it can deliver a lasting net gain.
- **Not everything can be offset** (paragraph 18): unique or irreplaceable habitat cannot be offset; the activity is redesigned or dropped.
- **Secure land, money and management:** secure tenure, a named manager, funding for the whole period and a monitoring program.

These conditions can rarely be met at village scale; an offset usually costs more than the investment, and the Project ends in five or six years. Treat an offset proposal as a sign that the activity is in the wrong place and test moving it first. Every offset needs World Bank prior review before any commitment, with funding and management that last beyond the Project.

Required result: good-practice controls in modified habitat; **no net loss** at least in natural habitat (the activity does not go ahead if this cannot be shown with simple village-scale measures; an offset only under the conditions above); and no works in critical habitat (Section 11.1). In practice, moving the activity is the answer in almost every case.

People's use of nature. Section 2C of Form BIO records what the site gives the community. If an activity would reduce or restrict it (taking water, blocking access, fencing off a fishing or collecting area, removing trees people use), it is at least Category B: the users are identified and consulted and the design keeps their access. If that is not possible, the DCT refers it to the CPMU, and it is handled under the Land Access Procedures and, for Masyarakat Adat, the IPPF. People can complain through the grievance mechanism (ESCP Action 10.2).

13. Rules for specific types of activity

Table V-4 sets out the rules for particular types of activity or situation, such as bringing in a new species, fisheries and aquaculture, ecotourism, water schemes, roads, telecommunication towers or wildlife found during works. It is not a screening tool. It is used after Form BIO has decided whether the activity can go ahead and its category: when the activity is designed and its ESCOP, Simple ESMP or BMP is prepared (Form BIO, section 2E), when the DCT checks the measures (Form BIO, Part BIO-3, check 8), and during works. The categories and exclusions in the third column are already covered by Form BIO (sections 2B to 2D and Part BIO-3); they are shown here so that the design stays within them. Find the situation in the first column, do what the second column says, and check the third column for the category or exclusion that applies. The section numbers (13.1 to 13.11) are used for cross-references elsewhere in this Procedure.

Table V-4. Rules for specific types of activity

Situation	What to do	Category / exclusion
13.1 Plants, animals and invasive species (ESS6 paragraphs 28–30; detailed controls in Appendix F)		
Where invasive species come from	Invasive alien species are plants or animals from elsewhere that spread and harm local nature. They arrive with fish and shrimp stock, seeds and seedlings, fodder, moved soil and gravel, and machinery, boats or nets, including between islands.	See Appendix F

Situation	What to do	Category / exclusion
Bringing a species into a village where it is not already established	Only with written confirmation from the competent agriculture or fisheries authority that the species is permitted and not invasive.	Without confirmation: excluded (X8). With confirmation: at least Category B
Fish and shrimp stock	Use native or already-established species. A non-native species needs a risk assessment, escape-prevention measures and written confirmation from the competent fisheries authority, obtained through the PIU.	X8
Ponds and cages	Design them so stock cannot escape. No direct water connection to a conservation area.	–
Moving machinery and equipment	Clean off soil, plants and water before moving between islands or river basins.	–
Planting and replanting	Use local native species from a local source. Never plant species known to be invasive in Indonesia.	–
13.2 Wildlife found during works		
Protected wildlife found: nests, burrows, roosts, turtle nests or animals	Follow the Wildlife Chance Find Procedure: stop work, protect the find, report it, and contact BKSDA or the relevant authority before restarting.	Appendix E
Project workers	The LMP Codes of Conduct forbid hunting, trapping, collecting, buying, selling, eating, transporting or keeping protected wildlife.	X9
Archaeological objects, graves or old structures	Use the cultural heritage Chance Find Procedure instead. Both stop work; wildlife finds go to the conservation authority, heritage finds to the culture office. Training covers both.	ESMF Annex VIII
13.3 Fisheries, aquaculture, livestock, farming, forestry and planting (ESS6 paragraphs 31–37)		
Fisheries	No destructive or illegal gear or effort. Do not size or site cold storage, landing or processing facilities so they push fishing beyond sustainable levels on a fully or over-fished stock. Where the DCT or CPMU suspects over-fishing, consult the provincial fisheries service before approval.	X11
Aquaculture	No conversion of mangrove or coastal wetland. Native or established species only. Specify how effluent, sludge and dead stock are managed. No discharge into conservation areas or onto coral or seagrass.	X7, X8
Livestock	No grazing or fodder collection in conservation areas or protection forest. Specify manure and wastewater management. Protect streams and springs.	X17

Situation	What to do	Category / exclusion
Farming and agroprocessing	Good International Industry Practice for soil and water conservation and integrated pest management. Follow the pesticide rule in 13.4. No support to production on land converted from natural habitat.	X4, X12
Forestry links	Legal, verified timber only. Community forestry links only under an approved social forestry scheme or an equivalent sustainable arrangement developed with the community.	X10
Planting (tree crops, fodder, shade, buffers, erosion control)	Only on land already farmed, converted or degraded, never on natural habitat. Check species for invasiveness (Appendix F; ESS6 paragraph 34).	X4
Many villages taking up the same activity	Where many villages do the same activity on one coast or in one catchment, the DCT (within the district) and the CPMU (across districts) may phase activities, set siting conditions or limit their number (ESS6 paragraph 33).	Decided by DCT / CPMU
Ecotourism	See 13.5.	–
13.4 Timber, building materials, feedstock and pesticides (ESS6 paragraphs 38–40; ESCP Actions 3.2 and 3.4; written into procurement documents, contracts and community implementation agreements under ESCP Actions 1.2 and 1.3)		
Timber	Legal, documented source only, with SVLK certification or equivalent proof of legal origin. Never timber of unknown origin or of a protected or CITES-listed species.	X10
Sand, gravel and stone	Licensed sources only. Never from riverbeds, beaches, mangroves, karst or protected areas.	X16
Trees cut during works	Fell only the minimum, identified and approved in advance. Felled timber may not be sold or taken away commercially; it may be used in the same investment or left on site as habitat. Never widen clearing to get timber.	ESS6 paragraph 36
Agroprocessing feedstock	Must not knowingly come from land converted from natural habitat after the Project effective date.	–
Pesticides	Never WHO Class Ia, Ib or II, Stockholm or Rotterdam Convention substances, or products not registered in Indonesia.	X12
13.5 Ecotourism		
Near a conservation area, marine conservation area or protection forest	No ecotourism infrastructure inside, or within 1 km of, these areas.	Excluded (X1, X2, X15)

Situation	What to do	Category / exclusion
Within 1 km of a Key Biodiversity Area, Ramsar site, ASEAN Heritage Park or other sensitive ecosystem	Consult the responsible authority, write a visitor carrying capacity statement and prepare a BMP.	Category C
Trails, boardwalks, jetties and viewing platforms	Design them to keep visitors together and contained. Route them away from nesting, roosting, spawning and breeding areas.	Category C where they give access to natural habitat (Table V-3)
Wildlife	No feeding, baiting, handling or captive display of wildlife. No sale of wildlife products or souvenirs made from protected species.	X9
Waste and wastewater	Plan and fund waste and wastewater management, including for homestays, before the facility opens.	–
Lighting and noise	Control them near night-active animals, nesting turtles and roosts.	–
13.6 Water: streams, dams, pumps and wells		
Dam, weir, retention pond or diversion on a natural stream, or any structure across it	State in the design, as a number, the flow left downstream through the dry season for aquatic life and downstream users.	Category C
Pump or intake on a natural stream without a structure across the channel	State the downstream flow in the same way.	Category B
Stream used by migratory fish	Include a fish passage, or move the structure.	Excluded if fish migration is blocked without passage (X14)
Stream feeding a conservation area, mangrove, significant wetland or peat hydrological unit	Do not take water from it or dam it.	Excluded (X14)
Several schemes in one catchment	The DCT checks total water use with the cumulative water check in ESMF Section 5.3 and refers schemes that share one source to the CPMU.	Decided by DCT / CPMU

Situation	What to do	Category / exclusion
Wells, boreholes and pumps, including solar pumps under Component 1	Size the yield to the use, not to the pump. State the expected pumping rate and set a volume limit in the design (solar pumps have no fuel cost to limit pumping). Do not site wells where they would draw down a spring, wetland, peat unit or mangrove that people use or that has conservation value. The DCT checks the combined effect of boreholes in one aquifer.	Drawing down peat: excluded (X14). May affect a spring, wetland or mangrove: Category C, consult the environment authority
13.7 Roads, tracks and access (roads open access to places people could not easily reach, which can lead to deforestation, encroachment, illegal logging, hunting and land conversion far beyond the road)		
Routine maintenance or rehabilitation within the existing alignment, width and surface type	Apply the ESCOP for roads.	Normally Category A or B
New alignment, or extension towards or into natural forest or a conservation area	Screen as high sensitivity; send to the CPMU.	Category C; excluded where it creates new access into natural forest or a conservation area (X13)
Upgrading a road or track leading to or through natural forest or other sensitive natural habitat, where it would open or increase access	Do not finance. Choose another alignment or investment.	Excluded (Exclusion List No. 4, ESMF Annex I; X13)
13.8 Facilities built by others, and combined effects		
The activity depends on a facility the Project does not finance (for example an access road built by others to a Project tower, a quarry opened to supply Project works, or a power line to an off-grid site)	Under ESCP Action 1.5, the CPMU determines whether it meets the ESS1 definition of an Associated Facility. If it does, screen its risks under this Procedure as far as the Borrower can control or influence it, and add the measures to the activity's instruments. The village identifies the facility and the party responsible in the E&S Screening Form (Annex II, Section 3), and the E&S focal point of the District Coordination Team is notified and refers it to the CPMU for determination before approval (ESMF Section 1.3).	Form BIO, Part BIO-3 check 10
Combined effects of several activities	The DCT looks across villages in its district, and the CPMU across districts sharing a river basin, mangrove belt or forest block, using the cumulative impact check in ESMF Section 5.3 (triggers, landscape units and steps). The CPMU may require phasing, design changes, a shared measure, or the exclusion of individual activities.	Decided by DCT / CPMU

Situation	What to do	Category / exclusion
13.9 Telecommunication towers (Sub-component 2.2**)**		
Choosing the tower site	Check the tower site, its access track and its power line route against the exclusion list (Section 8.3). No tower inside, or within 1 km of, a conservation area, marine conservation area or protection forest, and none in natural forest, mangrove, peat, other natural habitat or critical habitat.	Excluded (X1, X2, X4, X5)
Preferred locations, in this order	Use land that is already open or existing infrastructure wherever possible: • first, share an existing tower or other tall structure (co-location); • second, use the roof or yard of an existing building or public facility; • third, use land that is already cleared, farmed or built on, close to an existing road and power line. Use a new site outside the settlement only if none of these is possible, and record why in Form BIO (section 2E).	New site outside the settlement: Category C (Table V-3)
Footprint, access track and power supply	Keep the fenced compound small and fell as few trees as possible. Use existing roads and power lines; a new access track into natural forest or other natural habitat is not allowed. If the track or power line is built by others, apply the Associated Facility test (13.8). Apply ESCOP 1 (all physical works) during construction.	X13; Form BIO question D6
13.10 Avoiding conflict between people and wildlife		
National rules	Follow the national rules on human–wildlife conflict and wildlife rescue, and the advice of BKSDA (Section 3.3).	–
Choosing the site	Ask the community (Form BIO, questions C6 to C8) which wild animals visit the area, such as wild boar, macaques, elephants, tigers, crocodiles or snakes, and where they move. Where another site is possible, do not place ponds, pens, crops, homestays, trails or jetties across wildlife paths, at forest edges where animals often raid, or on river banks used by crocodiles.	A "Yes" at C6 makes the activity at least Category B
Food, feed and waste	Do not leave food waste, fish waste, feed, offal or carcasses in the open. Use closed bins and covered compost, and keep feed and harvested crops in closed, animal-proof stores.	ESCOP
Livestock, fish ponds and crops	Keep livestock in sturdy pens at night, especially near forest edges. Protect ponds, cages and crops with fences, nets, trenches, guarding, noise or lights. Use visible netting that does not trap birds or other animals. Agree joint guarding arrangements in the village where raids are common.	–

Situation	What to do	Category / exclusion
People's safety	Put up warning signs at waterside works, jetties and trails where crocodiles, snakes or other dangerous animals occur. Workers near water or forest work in pairs, carry a first-aid kit and know the way to the nearest health facility.	ESCOP 1; Annex IV (OHS)
What is never allowed	Do not kill, trap, poison, snare or move protected animals, and do not feed wild animals. Use only non-lethal ways to keep animals away.	X9
When a conflict happens	Report it at once to the village government and to BKSDA or the relevant authority, and follow their advice; do not act alone against the animal. Record the incident and report it in monitoring. People can complain through the grievance mechanism. Repeated conflict at a site triggers a review of the site or design.	Sections 11.3 and 14; Appendix E
13.11 Nature-based solutions: avoiding invasive species (mangrove and riverbank planting, slope and erosion protection, buffer strips, green belts, agroforestry, constructed wetlands and biofilters)		
Choosing species	Use species that are native to the area and already grow nearby; ask the agriculture, forestry or environment office or a local nursery which species fit. Never use species known to be invasive in Indonesia, for example Acacia nilotica, Mimosa pigra, Chromolaena odorata, Lantana camara, Mikania micrantha, water hyacinth (Eichhornia crassipes) or Salvinia molesta. Do not choose a non-native species just because it grows fast.	A non-native species needs written confirmation that it is permitted and not invasive (X8); at least Category B
Seeds and seedlings	Collect seed from local parent plants, or buy from nurseries on the same island and preferably in the same district. Check that seedlings and their soil carry no weeds, pests or other plants. Record where each batch came from.	Appendix F
Mangrove rehabilitation	Plant only local mangrove species suited to each tidal zone, in places where mangroves grew before, using seed from nearby healthy stands. Do not plant on seagrass beds, mudflats or salt flats, which are habitats in their own right.	Planting on seagrass: X4
Riverbanks, slopes and erosion control (bioengineering)	Prefer native grasses, shrubs, bamboo and trees. A non-native plant may be used only if it is already established in the village or confirmed as non-invasive by the agriculture or forestry office.	X8
Constructed wetlands, biofilters and ponds	Use native water plants. Never use water hyacinth, Salvinia or water lettuce (Pistia stratiotes), even for wastewater treatment. Do not release non-native fish, for example for mosquito control.	X8
Agroforestry, shade, fodder and green belts	Mix several native species rather than planting one. Fast-growing fodder grasses and legumes can spread; check them first (Appendix F).	Appendix F

Situation	What to do	Category / exclusion
After planting	Check planted areas regularly during the establishment period set in the Simple ESMP or BMP. Pull out invasive plants before they flower or set seed, and replace dead plants with native species. Record the checks; report any spread of an invasive species as an incident.	Section 14; Appendix F

PART 4 – MONITORING, TRAINING AND RECORDS

14. Monitoring, reporting and complaints

Monitoring is proportionate to risk and may cover clearing, habitat condition, wildlife encounters or deaths, replanting success, invasive species and water quality. Any significant incident or unexpected impact triggers a review of the measures.

Indicator	How often	Source	By
Share of villages with a Step 1 Sensitivity Flag	Yearly	Register	CPMU
Number and share of activities screened with Form BIO before approval	6-monthly	Digital system	CPMU
Activities by final category (A / B / C)	6-monthly	Digital system	CPMU
Activities excluded, moved or redesigned for biodiversity reasons	6-monthly	Form BIO	CPMU / DCT
Activities excluded under the 1 km rule	6-monthly	Form BIO	CPMU / DCT
Associated Facilities identified, CPMU determinations and measures taken	6-monthly	Form BIO, Part BIO-3; screening record	CPMU
BMPs prepared, cleared and implemented	6-monthly	CPMU record	CPMU
Offsets proposed, cleared and delivered, and their monitoring status	6-monthly and per proposal	CPMU record; BMPs	CPMU
Required district site visits carried out (share)	6-monthly	Form BIO, Part BIO-3	DCT
Completed works complying with their biodiversity measures	6-monthly	Supervision reports	DCT / CPMU
Wildlife chance finds recorded and closed	As they happen; reported 6-monthly	Chance find register	CPMU
Invasive species incidents and corrective actions	As they happen	Incident register	CPMU
Staff trained on biodiversity screening, by role	6-monthly	Training records	CPMU

Reporting. Results, including activities excluded or redesigned on biodiversity grounds and the Associated Facilities identified and measures taken, go in the semi-annual E&S monitoring report to the World Bank under ESCP Action C, no later than 45 days after each period, and are summarized for district and village stakeholders under the SEF. Any unforeseen impact on nature is an **incident** reported to the Bank under ESCP Action E within 48 hours of the CPMU learning of it (24 hours if severe), followed within 10 days by a root-cause review and a Corrective Action Plan agreed with the Bank.

Complaints about nature (habitat damage, loss of access to resources, wildlife conflict, water flow, contractor non-compliance) go through the Project grievance mechanism (ESCP Action 10.2) at village, district and national (SIPEMANDU and SP4N-LAPOR!) levels. Tag them in the grievance register so the CPMU can spot patterns. Complaints may be anonymous, without fear of retaliation.

15. Training and the digital system

Training. Facilitators, district teams and village governments must be trained **before** villages prepare proposals, within the Project training program in the ESMF and POM (ESCP Action B). Training covers: why nature matters for village investments (plain language, Indonesian examples); reading the Register and district map sheet; recognizing mangrove, peat, karst, natural forest and river-bank habitat; completing Form BIO, GPS, geotagged photos and the community discussion; the exclusion list and helping villages find alternatives; the Associated Facility test (Table V-4, 13.8); the Wildlife Chance Find Procedure and the ban on hunting, collecting and trading wildlife; and invasive species rules, including the choice of species for nature-based solutions; and how to avoid conflict between people and wildlife. Refresher training follows the ESMF and POM schedule and whenever this Procedure or the Register changes significantly.

Digital system (ESCP Action 1.2). Form BIO is built into the Project's digital proposal and verification system, which must: fill in each village's flag and features from the Register; require GPS and geotagged photos for every site; apply Table V-2 automatically and show the category; block proposals with an exclusion and send Category C proposals to the CPMU; and keep all forms, attachments and clearances as the permanent record. A reviewer may raise an automatic category, but may lower it only with a documented justification signed by the CPMU environmental specialist.

16. Records

Keep for the life of the Project and the period required by the Loan Agreement, in the digital system with copies in the village and district offices: every version of the Register; every Form BIO with GPS, photos, site map, community discussion record and site visit records; the map and data sources used, with access dates; every Simple ESMP, BMP and Critical Habitat Assessment; consultation records; the chance find and incident registers; and monitoring and supervision reports and corrective actions.

PART 5 – HABITAT TYPES AND PROTECTED AREAS

17. Habitat types and protected areas

Habitat	ESS6 definition (summarized)	How to recognize it in SEHATI
Modified (ESS6 paragraphs 19–20)	Many non-native species, or people have substantially changed the area's main ecological functions and species.	Settlements, house gardens, sawah, dryland farms, plantations, existing ponds, road corridors, existing buildings. Most SEHATI activities are here.
Natural (paragraphs 21–22)	Largely native species; people have not fundamentally changed how the area works.	Natural forest including secondary forest; mangrove; peat swamp forest; karst vegetation; natural wetlands, swamps and lakes; undisturbed river banks; seagrass; coral reefs; natural beaches and dunes; natural grassland, savanna and scrub (treated as natural habitat unless the DCT confirms the land is modified).
Critical (paragraphs 23–24)	High biodiversity importance: Critically Endangered or Endangered, endemic or restricted-range species; large concentrations of migratory or congregating species; highly threatened or unique ecosystems; and the processes that support them.	Decided only by a Critical Habitat Assessment (Appendix G). Flagged by overlap with KBAs, Ramsar sites, ASEAN Heritage Parks or the global critical habitat layer, or confirmed CR or EN species.

Modified land can still matter (ESS6 paragraph 20): mature or hollow trees, sacred groves, old garden trees, village ponds and paddies used by waterbirds and frogs, springs and agroforestry. Where Form BIO records any of these, the activity is at least Category B and the design keeps the feature. Habitat is judged over the whole ecological unit (watershed, bay, forest block, wetland complex or species range), not only the footprint (Appendix G.2).

Protected areas. ESS6 (paragraphs 26–27) allows works in legally protected or internationally recognized areas only if legally permitted, consistent with the management plan, consulted with the managing authority, communities and Indigenous Peoples, and supporting the area's conservation aims. SEHATI goes further: physical works inside or adjacent to a conservation area, marine conservation area or protection forest are **excluded outright** (X1 and X2), following ESCP Action 6.1.

For the purposes of this Procedure, "adjacent" means within 1 km of the boundary of the area concerned.[1]

Where this distance is applied. If the 1 km distance is revised, change it in every place listed here. In this Procedure: this Section; the Flag C criteria in Table V-1 and the note on the 1 km rule below it; questions Q1 and Q3 of Table V-2; the conservation aims requirement in Section 10.2; the World Bank review triggers in Section 10.3; the ecotourism rules in Section 13.5; the telecommunication tower rules in Section 13.9; the monitoring indicator in Section 14; the definition in Section 5; exclusions X1,

[1] "Adjacent" is not defined in the ESCP. The 1 km distance is the distance set in the SEHATI Exclusion List (ESMF Annex I, No. 4) and matches the buffer used for the village sensitivity classification, so one distance governs the whole Procedure; it can be judged on the ground by a facilitator and computed reliably in GIS; and it errs towards protection where the wording is open.

X2 and X15 in Appendix A; and questions F1, B1, B2, C1 and C2 of Form BIO. In the ESCOP (ESMF Annex III): the site selection measures of ESCOP 1 and ESCOP 6, the ecotourism measures of ESCOP 8, and the field monitoring checklists for ESCOP 1 and ESCOP 8. In the ESMF: item 4 of the Exclusion List (Annex I), the summary of the Exclusion List in ESMF Section 3.3 (Table 6), and the siting measures in ESMF Table 7 (Section 5.2) and Table 8 (Section 5.5).

Appendix A – Biodiversity Exclusion List

SEHATI will **not** finance any activity below, under any circumstances. This list adds to the Project Exclusion List (ESMF Annex I); where both cover the same subject, the stricter wording applies. If any item applies, the activity is dropped, redesigned or moved. **No waiver may be given at village or district level.** Facilitators and district teams record every exclusion applied and the alternative adopted; these records are reported to the World Bank.

Ref.	SEHATI will not finance	E&S Exclusion List item
X1	Any physical works or land-disturbing activity inside, or within 1 km of, a conservation area (Cagar Alam, Suaka Margasatwa, Taman Nasional, Taman Hutan Raya, Taman Wisata Alam, Taman Buru) or marine conservation area, including its core, buffer and use zones, even if a permit could be obtained. No plan, permit or mitigation makes it eligible.	No. 4
X2	Any construction, vegetation clearing or land-use change inside, or within 1 km of, protection forest (Hutan Lindung).	No. 4
X3	Any activity needing a Forest Area Use Approval (PPKH) or release of forest area (pelepasan kawasan hutan).	Biodiversity-specific
X4	Converting, clearing, draining, filling, burning or degrading natural habitat: natural forest of any type and age, mangrove, peat swamp forest and peatland, karst, natural wetlands, swamps and lakes, seagrass, coral reefs, sand dunes and turtle-nesting beaches. Clearing by burning is prohibited on any land (E&S Exclusion List No. 7).	No. 15 and No. 18
X5	Any activity that would harm critical habitat as defined under ESS6 and IFC PS6.	No. 4
X6	Any activity that needs, or falls in a category requiring, an AMDAL.	No. 3
X7	New aquaculture ponds (tambak) made by converting mangrove or coastal wetland, or expanding ponds into them.	No. 15
X8	Introducing, farming, stocking or releasing species that are prohibited or classified as invasive in Indonesia; and any non-native species in aquaculture or farming without a risk assessment, escape-prevention measures and written confirmation from the competent agriculture or fisheries authority that it is permitted and not invasive.	No. 6
X9	Any activity that is likely to result in the killing, capture or trade of protected species. Capturing, killing, buying, selling, transporting, keeping, processing or displaying protected species or CITES Appendix I species, and any support to wildlife trade, including souvenirs from protected species. CITES Appendix II species and wild-caught IUCN Vulnerable, Endangered or Critically Endangered species are **not** excluded: they are screened under item 1.8 of the E&S Screening Form and may proceed only with its measures (legal or captive-bred sources, permits and quotas, avoiding breeding seasons and important habitat, limits on quantity, consultation with BKSDA or the relevant agency, monitoring).	No. 5
X10	Commercial logging, sawmilling, wood-chipping and charcoal production from natural forest; and timber without verified legal origin (SVLK or equivalent).	No. 1 and No. 20

Ref.	SEHATI will not finance	E&S Exclusion List item
X11	Destructive fishing and gear that enables it (trawls where prohibited, explosives, poisons, cyanide); mining or collecting coral, coral sand or coral rock.	No. 18 and No. 19
X12	Pesticides in WHO Class Ia, Ib or II, Stockholm or Rotterdam Convention substances, or products not registered in Indonesia.	No. 8
X13	New or upgraded roads or tracks that create new access into natural forest, a conservation area, or natural habitat people could not easily reach before.	No. 4; No. 15 for forest clearing
X14	Taking, storing or diverting surface water or groundwater that would block fish migration without passage, draw from a stream feeding a conservation area, mangrove, significant wetland or peat hydrological unit, or draw down a peat hydrological unit.	No. 15 for peat; otherwise biodiversity-specific
X15	Ecotourism infrastructure inside, or within 1 km of, a conservation area, marine conservation area or protection forest; and any that increases visitor pressure on a KBA, Ramsar site or ASEAN Heritage Park without written approval of the responsible authority and a documented carrying capacity assessment.	No. 4 for conservation areas and protection forest; otherwise biodiversity-specific
X16	Taking sand, gravel, stone or soil from riverbeds, active channels, beaches, mangroves, karst or protected areas; materials from unlicensed sources; coastal or water body reclamation.	No. 17
X17	Grazing, fodder collection or plantations inside a conservation area or protection forest.	No. 4 and No. 15 for plantations; grazing and fodder are biodiversity-specific
X18	Activities on land where natural habitat was cleared in the twelve months before the proposal, apparently to make the site eligible.	Biodiversity-specific
X19	Any activity that would significantly harm an Essential Ecosystem Area (KEE), a wildlife corridor or a migration route.	Biodiversity-specific
X20	New physical works or land clearing in an area on the PIPPIB moratorium map, other than within existing settlements, farmland or an existing footprint.	No. 15 for forest and peat clearing; otherwise biodiversity-specific

Appendix B – Form BIO: Biodiversity Screening, Verification and Clearance

One form for each activity, in four parts, one for each step. Part BIO-1 is completed once for each village by the CPMU from the Register (Section 7) and copied into Part BIO-2. Part BIO-2 is completed for each activity by the village facilitator and village government at the site (Section 8); Part BIO-3 by the DCT (Section 9); Part BIO-4 by the CPMU, only for activities referred to it (Section 10). Upload the form to the digital system after each part. References elsewhere in the ESMF to Forms BIO-1, BIO-2, BIO-3 and BIO-4 mean the corresponding Parts of this form. Where more than one flag or category applies, the highest is used: C is higher than B, and B is higher than A. If unsure of an answer, choose the answer that gives the higher category and add a note.

PART BIO-1 – Village sensitivity flag (CPMU, once for each village from the Register, updated every year; Step 1)

1A. Flag criteria – answer every criterion. The village takes the highest flag with a "Yes" (C is higher than B, and B is higher than A). If every answer is "No", the flag is B.

No	Criterion	Flag if "Yes"	Yes	No
F1	The village overlaps, or lies within 1 km of: a conservation area (KSA/KPA: Cagar Alam, Suaka Margasatwa, Taman Nasional, Taman Hutan Raya, Taman Wisata Alam, Taman Buru) or marine conservation area; protection forest (Hutan Lindung); a Key Biodiversity Area, Important Bird and Biodiversity Area, Ramsar site, ASEAN Heritage Park or World Heritage property; the UNEP-WCMC Global Critical Habitat Screening Layer; an Essential Ecosystem Area (KEE) or wildlife corridor	C	☐	☐
F2	The village contains mapped mangrove, peat hydrological unit (KHG), protected karst (KBAK), coral reef, seagrass, or primary or secondary natural forest, or falls within the PIPPIB moratorium map	C	☐	☐
F3	The village lies 1–5 km from any feature in F1 or F2	B	☐	☐
F4	The village contains other natural habitat (river-bank vegetation, natural lakes and swamps, estuaries, remnant forest, turtle-nesting beaches)	B	☐	☐
F5	The village is in a KPP (Kawasan Perdesaan Prioritas) cluster where several villages share one river, coast or forest block	B	☐	☐
F6	The whole village is modified land (settlement, sawah, dryland farms, plantation, existing ponds) and more than 5 km from every feature in F1 and F2	A	☐	☐

1B. Flag and record

Item	Entry
Province / district / village	
Register version and date; map layers (Appendix C) and KLHS documents used	

Item	Entry
Village flag (the highest flag in 1A)	☐ C – every activity needs a site visit; any new footprint outside the settlement goes to the CPMU (Step 4) ☐ B – site visit for any new footprint or works near water or natural vegetation ☐ A – standard screening; the ESCOP applies to all works
Features that triggered the flag, distance to each, and the authority that manages each (Balai Taman Nasional, BKSDA, DLH or fisheries authority)	
Village flagged C: does any part of the village lie more than 1 km from the protected area boundary?	☐ Yes – physical works only at sites outside the 1 km band ☐ No – only non-physical activities
CPMU environmental specialist: name, date, signature	

PART BIO-2 – Village screening (facilitator and village government, at the site; Step 2)

Key terms – what the words in Part BIO-2 mean

Term	Meaning
Modified land	Land people have already changed: settlement and yards, sawah and dryland farms, plantations, existing ponds, buildings and roads.
Natural habitat	Land or water where native plants and animals still dominate, even if disturbed: natural forest (primary or secondary), mangrove, peat swamp, natural wetlands, lakes, rivers and their bank vegetation, scrub, natural grassland or savanna, beaches, coral and seagrass. If unsure, treat it as natural habitat.
Settlement	The built-up part of the village: houses, yards, public buildings and the land between them.
Footprint	All land the activity uses, including access, stockpiles, borrow areas and temporary works.
Existing right-of-way	The strip already used by an existing road, canal or pipe.
Mature tree	A tree with a trunk diameter of 20 cm or more at chest height (about 1.3 m above the ground).
Distance (50 m, 1 km, 1–5 km)	Measured from the nearest edge of the site to the boundary of the area or the edge of the water, using GPS and the features recorded in Part BIO-1.
Protected species	Plants and animals protected under Indonesian law. If unsure, ask the DCT or the BKSDA.
Category A / B / C	Low / moderate / high biodiversity sensitivity of the activity. What each category requires is in 2E.

2A. Activity and site

Item	Entry	Item	Entry
Province / district / village		Village flag (Part BIO-1)	A ☐ B ☐ C ☐
Activity name and description		Features recorded in Part BIO-1	
Package and sub-component (1.3 / 2.1 / 2.2)		Footprint (m² or length in m)	
Site GPS (all corners, or start and end)		Date of site visit	
People taking part (list below 2A)		Photos attached (at least four, geotagged)	☐ Yes

People taking part – at least these people walk the whole site together with the facilitator

Required participant	Name, position and signature
Village government: Kepala Desa or Sekretaris Desa, or the Kasi Kesejahteraan or Kaur Perencanaan	
Kepala Dusun (or equivalent) of the hamlet where the site is	
A member of the BPD (Badan Permusyawaratan Desa)	
Head of the group that will use or manage the asset (BUM Desa, or the women's, youth, farmer or fisher group)	
Community member who knows the site well (farmer, fisher or collector of forest or coastal products) – 1	
Community member who knows the site well – 2	
Masyarakat Adat only: ketua adat or a representative of the customary institution (screen together with the IPPF screening)	
Village facilitator	

2B. Exclusion check – answer every question. **One "Yes" = not eligible as proposed:** record the item, tell the village government, help find another site or investment, and screen again.

No	Question	Excl.	Yes	No
B1	Is the site inside, **or within 1 km of**, a conservation area (Cagar Alam, Suaka Margasatwa, Taman Nasional, Tahura, Taman Wisata Alam, Taman Buru) or marine conservation area?	X1	☐	☐

No	Question	Excl.	Yes	No
B2	Is the site inside, **or within 1 km of**, protection forest; or inside any other Forest Area (Kawasan Hutan)?	X2 / X3	☐	☐
B3	Will it clear, drain, fill, burn or damage natural forest, mangrove, peat, karst, natural wetland, seagrass, coral, dunes or a nesting beach?	X4	☐	☐
B4	Will it create or expand aquaculture ponds in mangrove or coastal wetland?	X7	☐	☐
B5	Does it involve a prohibited or invasive species, or a species not established in the village **without** written confirmation from the agriculture or fisheries office that it is permitted and not invasive? (**With** confirmation: at least Category B.)	X8	☐	☐
B6	Does it involve capturing, keeping, selling, transporting or processing protected wild animals or plants (national list or CITES Appendix I), or their products?	X9	☐	☐
B7	Does it involve logging, sawmilling, charcoal from natural forest, or timber without legal documents?	X10	☐	☐
B8	Does it involve destructive or prohibited fishing gear or methods, or collecting coral or coral sand?	X11	☐	☐
B9	Will sand, gravel, stone or soil come from a riverbed, beach, mangrove, karst, protected area or unlicensed source?	X16	☐	☐
B10	Will a new or upgraded road or track give access to forest or a natural area that people cannot easily reach today?	X13	☐	☐
B11	Will it take, store or divert water in a way that could dry out a river, wetland, mangrove or peat area, or block fish movement?	X14	☐	☐
B12	Is it an ecotourism facility inside, or bringing more visitors into, a conservation area?	X15	☐	☐
B13	Was natural habitat cleared here in the last twelve months, apparently to prepare for this proposal?	X18	☐	☐
B14	Does it require an AMDAL?	X6	☐	☐
B15	Is the site flagged as possible critical habitat, or known to hold many threatened, endemic or migratory animals?	X5	☐	☐
B16	Will it buy or use a pesticide not registered in Indonesia, or restricted (WHO Class Ia, Ib or II; Stockholm or Rotterdam)? Check the label.	X12	☐	☐
B17	Is it inside, or would it significantly affect, a KEE, wildlife corridor or migration route?	X19	☐	☐
B18	Will new works or clearing take place inside the PIPPIB moratorium map, other than in settlements, farmland or an existing footprint?	X20	☐	☐
B19	Will animals graze, fodder be collected, or a plantation be set up inside a conservation area or protection forest, even if the facility is outside?	X17	☐	☐

2C. Site sensitivity – ask at least two community members who know the site and answer every question. The site takes the highest category from the "Yes" answers in C1 to C9 and the land cover ticked in C10 (C is higher than B, and B is higher than A); in C10, tick the land cover instead of answering "Yes" or "No". C11 and C12 are recorded and do not change the category. What each category requires is set out in 2E. (Same rules as Table V-2 of the Procedure.)

No	Question	Category if "Yes"	Yes	No
C1	Is the site inside, or within 1 km of, a Key Biodiversity Area, Ramsar site or ASEAN Heritage Park, or inside mapped mangrove, peat, karst, coral or seagrass? Use the features and distances in Part BIO-1, checked on the ground. Distance: ____ km	C; refer to the CPMU (Part BIO-4)	☐	☐
C2	Is the site 1–5 km from a conservation area, protection forest or any feature in C1, or within 1 km of mapped mangrove, peat, karst, coral or seagrass? Distance (Register, checked on the ground): ____ km	B	☐	☐
C3	Does the village contain natural habitat (river-bank vegetation, natural wetland, remnant forest, estuary, nesting beach), or mangrove, peat, karst, coral, seagrass or natural forest that is not mapped? Where, how far: ____	B	☐	☐
C4	Is there a river, stream, spring, lake, swamp or wetland within 50 m of the site? Name, distance: ____	B	☐	☐
C5	Is the site modified land with value for nature: mature or hollow trees, sacred grove, village pond or paddy used by waterbirds, spring, or established agroforestry?	B; keep the feature in the design; if not possible, refer to the DCT	☐	☐
C6	Protected or notable animals seen at or near the site (primates, hornbills, eagles, deer, turtles, dolphins, crocodiles, pangolins, others)? Which, when: ____	B; do not place the works across animal paths, at forest edges where animals raid, or on river banks used by crocodiles	☐	☐
C7	Site or nearby area used for fishing, hunting, collecting forest or coastal products, grazing or medicinal plants? By whom, for what: ____	B, if the activity would reduce or restrict this use; keep people's access in the design; if not possible, refer to the DCT	☐	☐
C8	Nesting, spawning, breeding or feeding areas nearby, or seasons when animals gather? Describe, season: ____	B	☐	☐
C9	Customary rules, sacred forest, trees or springs at or near the site? (Also screen under Cultural Heritage Procedures and IPPF.)	B; keep the feature in the design; if not possible, refer to the DCT	☐	☐

No	Question	Category if "Yes"	Yes	No
C10	Land cover at the site – tick every type present: **Modified land:** ☐ settlement or yard ☐ sawah or dryland farm ☐ plantation ☐ existing ponds ☐ buildings, roads or other existing footprint **Other land:** ☐ scrub (semak belukar) ☐ grassland or savanna (padang rumput, alang-alang) ☐ fallow land with regrowth (bera) ☐ trees or remnant forest ☐ bare or recently cleared land ☐ other: ____	A, if only modified land is ticked B, if any other land is ticked (treated as natural habitat unless the DCT confirms it is modified land)	–	–
C11	Does the site flood or erode, or has the river changed course here? Describe: ____	No category; record for E&S Screening Form item 1.4 (disaster risk)	☐	☐
C12	Has anyone in the community raised a concern about this site? Describe: ____	No category; the DCT checks it (Part BIO-3)	☐	☐

2D. Activity sensitivity – answer every item. The activity takes the highest category with a "Yes" (C is higher than B, and B is higher than A). If every answer is "No" (rehabilitation within an existing footprint, works entirely within settlement or farmland, tools and equipment, training, studies and digital services), the activity is Category A (Low). What each category requires is set out in 2E. (Same rules as Table V-3 of the Procedure.)

No	The activity involves	Category if "Yes"	Yes	No
D1	New footprint on land not already settled, farmed or built on	C (High)	☐	☐
D2	New road or track alignment outside an existing right-of-way	C (High)	☐	☐
D3	Damming, storing or diverting a natural stream or a structure across it (check dam, weir, retention pond); or a well, borehole or pump (incl. solar) that could draw down a spring, wetland, peat or mangrove	C (High)	☐	☐
D4	Ecotourism facilities, trails, platforms or jetties giving access to natural areas	C (High)	☐	☐
D5	Aquaculture or fisheries facilities in or next to mangrove, estuary or coastal wetland	C (High)	☐	☐
D6	New telecommunication tower outside the settlement, with access track and power supply	C (High)	☐	☐
D7	Clearing more than 0.25 ha, or felling more than five mature trees (trunk diameter 20 cm or more at chest height). Mature trees to be cut: ____; area to be cleared: ____ m² or ha	C (High)	☐	☐
D8	Works within 50 m of a stream, spring, wetland, mangrove or forest edge	B (Moderate)	☐	☐
D9	Earthworks over 500 m³, or a new borrow area	B (Moderate)	☐	☐

No	The activity involves	Category if "Yes"	Yes	No
D10	Permanent outdoor lighting near natural habitat	B (Moderate)	☐	☐
D11	Waste or wastewater discharging towards a stream or the sea	B (Moderate)	☐	☐
D12	Pump or intake on a natural stream without a structure across it	B (Moderate)	☐	☐
D13	Plant or animal species not already established in the village (only with the written confirmation in B5)	B (Moderate)	☐	☐

2E. Result and signatures

Result	Entry
Exclusion triggered in 2B?	☐ Yes – not eligible, item: ____ ☐ No
Site category (the highest in 2C) / activity category (the highest in 2D)	Site: ☐ C ☐ B ☐ A Activity: ☐ C ☐ B ☐ A
Enough information to decide the category?	☐ Yes ☐ No – put on hold: no approval, land clearing, contracting of works or mobilization until the information is obtained
Final category: the higher of the site and activity categories (C is higher than B, and B is higher than A); and instrument	☐ A – apply the ESCOP codes for the investment ☐ B – Simple ESMP with biodiversity measures from the ESCOP; DCT site visit ☐ C – refer to the CPMU (Part BIO-4); Biodiversity Management Plan and consultation with the responsible authority
Alternatives considered (site, alignment, design, other investment) and measures chosen. Work in this order and record each option, the one chosen and why (GPS of chosen and rejected sites): **1. Avoid:** put the activity outside natural habitat and away from sensitive features (another site, alignment or investment). This is the expected answer. **2. Reduce:** smaller footprint; use already disturbed ground; limit clearing and tree felling; avoid breeding, nesting, spawning and migration seasons; control noise, dust, light and sediment; keep workers and machines out of nearby habitat. **3. Restore:** after works, replant with local native species, restore drainage and stream banks, and remove all temporary works. **4. Offset:** not at village level; refer to the CPMU. Take the measures from the ESCOP for the investment and from the rules for this type of activity in Table V-4 (Section 13).	

Result	Entry
Attachments uploaded to the digital system and attached to the proposal	☐ GPS of the site ☐ At least four geotagged photos, one in each direction ☐ Record of the community discussion: date, who took part, what was said about nature and resource use ☐ Written confirmation from the agriculture or fisheries office (B5 / D13), if any ☐ Copy kept in the village office
Facilitator and Village Head: names, dates, signatures	

PART BIO-3 – District verification (DCT, before approval)

No	Check	OK	Comment / action
0	Site visit: ☐ done on ____ by (names) ____ ☐ not done because: ____ **A visit is required if any of these applies:** ☐ village flagged C ☐ activity Category B or C ☐ new footprint outside the settlement, new road alignment, water structure on a natural stream, ecotourism facility, aquaculture facility or telecommunication tower ☐ Part BIO-2 records protected species, mangrove, peat, karst, natural forest or wetland ☐ the photos do not match the answers ☐ someone has complained or asked about the site Where the site is Category B or C, or the information is not enough, the check is done by suitably qualified staff.		
1	Part BIO-2 complete; GPS within the village and matches the photos and proposal	☐	
2	Flag and features agree with Part BIO-1 and the Register, or the difference is explained with evidence	☐	
3	No exclusion applies: the answers in 2B are correct and match the site, the photos and the proposal	☐	
4	Habitat correctly described (modified / natural), using the Key terms in Part BIO-2; any mangrove, peat, karst or natural forest recorded	☐	
5	Alternatives genuinely considered; least-harm option proposed (B and C)	☐	
6	Required national permits and approvals identified and being obtained correctly	☐	

No	Check	OK	Comment / action
7	Community discussion on nature and resource use held and recorded	☐	
8	Correct instrument attached; measures specific, costed and assigned to a named person; measures in line with Table V-4 (Section 13) for the type of activity	☐	
9	Combined effects with other villages in the district considered (shared water source, discharge area, or location); cumulative impact check done where a trigger in ESMF Section 5.3 is met	☐	
10	Associated Facility test (ESCP Action 1.5) applied where the activity depends on a facility not financed by the Project (for example an access road built by others to a tower, a quarry opened to supply the works, or a power line to an off-grid site): the facility and the party responsible are recorded in the E&S Screening Form and referred to the CPMU for a decision before approval	☐	

Outcome	Entry
Decision	☐ Verified A (ESCOP in specification and agreement) ☐ Verified B (Simple ESMP adequate; supervision confirmed) ☐ Referred to CPMU as C on ____ (BMP and authority consultation needed) ☐ Returned to village: ☐ exclusion (item ____) ☐ screening not adequate ☐ site or design change. Advice given:
Final category confirmed	☐ A ☐ B ☐ C ☐ Not eligible
DCT member responsible: name, position, date, signature; date uploaded	

PART BIO-4 – CPMU clearance (only for activities referred under Step 4)

Item	Entry
Reason for referral	☐ Category C ☐ exclusion disputed or unclear ☐ combined effects ☐ unmapped natural habitat or protected species ☐ Associated Facility
Documents reviewed	☐ BMP ☐ Critical Habitat Assessment ☐ consultation record ☐ national permits ☐ other: ____
Consultation with managing authority	Authority: ____ Date: ____ Advice and how it changed the design: ____
World Bank prior review	☐ Not required ☐ Required: sent ____ cleared ____

Item	Entry
Decision and conditions	☐ Cleared, Category C with BMP ☐ Cleared with conditions ☐ Further assessment required ☐ Not eligible: move, redesign or drop. Conditions:
CPMU environmental specialist: name, date, signature; date uploaded	

Appendix C – Biodiversity Data Sources and Map Layers

The CPMU uses these layers for Step 1 and, where useful, for district verification. It records the version and date of every layer used and checks the current custodian at the time of use, because responsibilities changed when the former Ministry of Environment and Forestry was split into the Ministry of Environment / Environmental Control Agency and the Ministry of Forestry.

Layer	What it shows	Custodian / source
Kawasan Hutan and its functions	Conservation, protection and production forest	Ministry of Forestry
Kawasan Konservasi (KSA/KPA)	National parks, nature reserves, wildlife reserves, grand forest parks, nature tourism parks, hunting parks	Ministry of Forestry; BKSDA and Balai Taman Nasional
PIPPIB (moratorium map)	Primary natural forest and peatland where new permits are suspended	Ministry of Forestry
Peta Mangrove Nasional	Mangrove extent and condition	Ministry of Forestry
Kesatuan Hidrologis Gambut (KHG)	Peat hydrological units and their functions	Ministry of Environment
Kawasan Bentang Alam Karst (KBAK)	Protected karst landscapes	Ministry of Energy and Mineral Resources
Kawasan Ekosistem Esensial (KEE)	Essential ecosystems and corridors outside conservation areas	Ministry of Forestry; provincial governments
Marine conservation areas and marine spatial plans	Kawasan Konservasi Perairan; marine zoning; coral, seagrass and small island data	Ministry of Marine Affairs and Fisheries
RTRW and RDTR	Spatial plans, including kawasan lindung	ATR/BPN; provincial and district governments
KLHS of the provincial and district RTRW and RPJMD	Environmental carrying capacity, ecosystem services, biodiversity and climate vulnerability of the region, usually with maps; areas already under pressure	Provincial and district governments (usually through the DLH)
One Map Policy geoportal	Combined national thematic maps	Geospatial Information Agency (BIG)
Land cover and deforestation	Land cover classes and change	Ministry of Forestry
WDPA	Internationally recorded protected areas	UNEP-WCMC / Protected Planet
Key Biodiversity Areas (KBA)	Globally important biodiversity sites, including Important Bird and Biodiversity Areas and Alliance for Zero Extinction sites	KBA Partnership / BirdLife International
IUCN Red List	Species ranges and threat status	IUCN
Global Critical Habitat Screening Layer	Likely and potential critical habitat (IFC PS6 criteria)	UNEP-WCMC

Layer	What it shows	Custodian / source
Ramsar Sites; ASEAN Heritage Parks; World Heritage	Recognized wetlands and parks	Ramsar Secretariat; ACB; UNESCO
IBAT	Combined WDPA, KBA and Red List data with distance reports; the practical entry point for the CPMU	IBAT Alliance (subscription)

International layers are only indicative: overlap with a KBA or the critical habitat layer means "look more closely", and no overlap does not prove the site has no value, because many Indonesian sites are not mapped. A field observation in Form BIO can raise the category even where every layer is silent.

Appendix D – Biodiversity Management Plan: Outline

Required for every Category C activity; prepared by a qualified biodiversity specialist engaged by the CPMU or district, with the conservation authority and affected community. For most village investments, 10 to 20 pages plus maps and the mitigation table is enough.

Section	Content
1. Activity	What, exactly where (map, coordinates), how built and operated, footprint, materials, workforce, duration, operation and maintenance.
2. Why a BMP	The screening result and trigger: feature, distance, species or habitat.
3. Baseline	Habitats and condition (modified or natural under ESS6); species of concern and the basis for saying so; community benefits from nature; seasons; data sources and limits; field survey (date, method) where needed.
4. Legal context	National requirements, protection status, managing authority, permits.
5. Impacts	Direct, indirect, induced and cumulative impacts in construction and operation, including new access, water flow, disturbance and community resource use.
6. Alternatives	Sites, alignments, designs and technologies considered, and why the proposal causes least harm; or the evidence that no alternative exists.
7. Mitigation hierarchy	What is avoided, reduced and restored; the remaining impact; whether no net loss of natural habitat is achieved. If not, show that moving and redesigning were fully tested, then recommend not proceeding or set out an offset (Section 12).
7A. Offset (only if proposed)	Each offset condition in Section 12: last resort; measured residual impact and gain; additionality; like-for-like; site, tenure and map; manager; funding and its period beyond the Project; stakeholder and expert involvement; independent verification where critical habitat is affected; long-term monitoring. Unique or irreplaceable habitat: no offset.
8. Mitigation and monitoring table	Per measure: impact, measure and specification, where and when, named person responsible, cost and budget line, indicator, frequency and method, reporting route.
9. Chance finds and emergencies	Wildlife chance find procedure, invasive species controls, spill and fire response.
10. Consultation	Who (authority, community, Masyarakat Adat institutions, resource users), when, what was said, and what changed.
11. Responsibilities	Who does what, training needed, supervision.
12. Budget	Total cost of measures and budget line.
13. Reporting and review	What is reported, to whom, how often; triggers for review; measures continuing into operation.
Annexes	Maps, coordinates, photos, species lists, survey data, consultation records, correspondence, specialist CVs.

Appendix E – Wildlife Chance Find Procedure

Applies to **all Project works**. Include it in every works contract and community agreement, explain it at every worker induction, and display it in Bahasa Indonesia at every work site.

A chance find is: a live or dead animal that is, or may be, protected; a nest, burrow, den, roost, hive or turtle nest the works would disturb; a gathering of animals (bat roost, bird colony, fish spawning); a large or old tree with holes or nesting animals; or any habitat not found during screening (spring, cave, wetland, natural forest patch, mangrove).

What to do:

1. **Stop work** in the immediate area. Do not touch, move, feed, photograph up close, capture or harm the animal or feature.
2. **Secure the area:** mark a buffer of at least 50 m (more if the supervisor decides) and keep people and machines out.
3. **Report immediately** to the site supervisor, who tells the facilitator and village government the same day, and the DCT within 24 hours.
4. **Inform the authority** within 48 hours: the facilitator, with DCT support where needed, informs BKSDA (or the Balai Taman Nasional next to a national park, or the fisheries service for marine and coastal finds) and records the date and person contacted.
5. **Wait for advice.** Work in the buffer restarts only after the authority advises or, if it does not respond in reasonable time, after written clearance by the CPMU environmental specialist.
6. **Record and report** the find, advice and action in the chance find register and the semi-annual report. If the find shows the category was wrong, the CPMU corrects the Register.

All Project workers, at all times (LMP Codes of Conduct): no hunting, trapping, fishing other than lawful personal fishing, egg collecting or wild plant collecting; no buying, selling, eating or transporting protected wildlife or its products; no keeping wild animals at sites, camps or lodgings; no clearing beyond the marked works area; no fires except at designated, controlled places; no feeding wild animals.

Appendix F – Invasive Alien Species Controls

On Indonesia's islands, a species harmless on one island can be destructive on another. These controls apply to every Project activity that moves living things, planting material, soil or equipment.

Pathway	Control	Responsible
Aquaculture and fisheries stock	Native or already-established species; any non-native species needs written confirmation from the fisheries authority, through the PIU, that it is permitted and not invasive. Stock from certified hatcheries; quarantine before release.	Village government, BUM Desa; PIU; DCT
Escape from ponds and cages	Screened inlets and outlets, banks above the highest expected flood, secure nets; no direct water connection to a conservation area or natural water body where escape would matter.	Design consultant; DCT
Seeds, seedlings, fodder and cover crops	Local native species from the same island or nearest source for all replanting, erosion control, shade and amenity planting; never species known to be invasive; productive species introduced under an agriculture program must be registered and permitted. Fast-growing fodder grasses and legumes need particular care.	Facilitator; village government
Soil, sand, gravel and stone	Licensed suppliers in the district where practical; no moving soil or sediment between islands or river basins without inspection.	Contractor; DCT
Machinery and equipment	Clean machinery, tools, boats, nets and vehicles of soil, plants, seeds and standing water before moving between islands, river basins, or into or out of a village flagged C; record the cleaning.	Contractor; supplier; supervising consultant
Nature-based solutions	Native species only for mangrove, riverbank, slope, buffer and wetland planting and for constructed wetlands; no water hyacinth, Salvinia or water lettuce; monitor and remove invasive plants during establishment (Section 13.11).	Facilitator; village government; DCT
Invasive species already present	Do not spread them: keep contaminated soil on site, clean equipment, and remove the species from disturbed areas during reinstatement where feasible.	Contractor; village government

Any suspected introduction or escape is an **incident**: report it to the CPMU immediately, enter it in the incident register and, where it may cause significant harm, report it to the World Bank within 48 hours under ESCP Action E.

Appendix G – Critical Habitat: Criteria and Indicative Terms of Reference

For the CPMU and specialists only.

G.1 When a Critical Habitat Assessment is considered

Only where **all** apply: screening shows critical habitat may be affected; moving, redesigning or replacing the activity is not possible; the activity is of exceptional importance to the village; and the CPMU and the World Bank have agreed in writing. In every other case the activity is excluded or moved (Section 11.1).

G.2 Criteria

ESS6 paragraph 23 defines critical habitat by five values. The numerical thresholds below come from IFC Performance Standard 6 (2012) and Guidance Note 6 (2019) (Section 3.2); the specialist confirms the thresholds in force at the time of the assessment.

No	Value	Indicative threshold (IFC GN6, 2019)
1	Critically Endangered (CR) and Endangered (EN) species	At least 0.5 per cent of the global population and at least five reproductive units of an IUCN CR or EN species; also Vulnerable species whose loss would cause uplisting, and nationally or regionally listed CR or EN species as appropriate.
2	Endemic and restricted-range species	Global range of 50,000 km² or less (terrestrial); at least 10 per cent of the global population and ten reproductive units. Marine, coastal and river species use different definitions; check current guidance.
3	Migratory and congregating species	Regularly at least 1 per cent of the global population at any life stage, or predictably at least 10 per cent during environmental stress.
4	Highly threatened or unique ecosystems	At least 5 per cent of the global extent of an ecosystem assessed CR or EN on the IUCN Red List of Ecosystems, or a national or regional high conservation priority.
5	Key evolutionary processes	Qualitative: isolated islands, mountain tops, lakes, edaphic interfaces, connectivity and corridors, climate adaptation sites; expert judgment.

A reproductive unit is the minimum group needed to breed (for example five pairs or five breeding females). KBAs, Ramsar sites, Alliance for Zero Extinction sites and World Heritage properties strongly suggest a criterion may be met but are not a determination on their own. Each determination covers an ecologically appropriate area (watershed, coastal cell or bay, forest block, wetland complex, home range or migration route), which may extend beyond the village; the specialist proposes it before the assessment, the CPMU agrees it, and the boundary, reasons and data are recorded in the CHA and the screening record.

G.3 Indicative terms of reference

Element	Requirement
Objective	Decide against the five criteria whether the affected area is critical habitat and, if so, whether the conditions in ESS6 paragraph 24 could be met.

Element	Requirement
Specialists	Independent, internationally recognized, experienced in critical habitat assessment and relevant Indonesian ecosystems and species; not the party that designed the activity.
Assessment unit	The ecologically relevant unit (habitat patch, watershed, island, reef system), with reasons; not the project footprint.
Data and survey	Desk review of national and international data; consultation with the authority, national experts and local knowledge holders; field survey of suitable length, season and method.
Assessment	Criterion by criterion, with evidence and threshold calculations; confidence and data gaps stated.
If critical habitat is confirmed	Test each condition of ESS6 paragraph 24, including demonstrable long-term net gains; where any cannot be met, state plainly that the activity should not proceed.
Offsets in critical habitat	ESS6 paragraphs 16–17: net gain, verified by independent internationally recognized specialists as feasible and lasting; state plainly whether this is met. No offset for unique or irreplaceable habitat (paragraph 18).
Deliverables	Report with maps and coordinates; species and habitat evidence; consultation record; conclusion and recommendation; and, if proceeding, the BMP biodiversity content, monitoring program and any offset design.
Review	CPMU review, World Bank clearance and disclosure under the SEF.

ANNEX VI: Land Access Procedure

DRAFT

Land Access and Voluntary Land Donation Procedure

Strengthening Community Resilience and Sustainable Economic Development in Rural Indonesia (SEHATI)

Project ID: P515935

Document status	First working draft for project and Indonesian legal/technical review
Purpose	Adaptation of the RSDP II PNG Land Access Procedure to the SEHATI operating context
Core land strategy	Village land first; VLD only where strict eligibility criteria are met; negotiated use of other government land where feasible
Excluded approach	No involuntary land acquisition under SEHATI

DRAFTING NOTE: This is a substantive first draft. Yellow drafting notes and orange callouts identify matters that require confirmation through Indonesian legal review, project design decisions, and consultation with MoVDA and relevant land authorities.

Document Development Status

Section / issue	Draft position	Further work
Land access hierarchy	Village land is the first and preferred option. VLD is a secondary option. Other government land may be used through negotiated agreement.	Confirm terminology and legal authority for each category of village land.
Involuntary acquisition	Not permitted. A subproject that cannot secure compliant land access must be redesigned, relocated, or rejected.	Confirm this exclusion in the ESMF, ESCP, POM, eligibility criteria and financing agreements.
Government land	May be negotiated with the controlling department. Agreement duration must support technical, financial and operational feasibility.	Develop minimum term and agreement form by asset class; clarify approval authority.
VLD	Permitted only for minor impacts, direct beneficiary donors, informed choice, clear rights and independent verification.	Validate thresholds and verification arrangements in Indonesian context.
Templates	Core forms and minimum fields are outlined.	Translate into Bahasa Indonesia and align with village systems and Musyawarah Desa documentation.

1. Introduction

1.1 Purpose

This Land Access and Voluntary Land Donation Procedure (the Procedure) establishes the principles, eligibility rules, due diligence, consultation, documentation, approval, grievance and monitoring requirements for making land available for SEHATI-financed village-level investments. It is intended to ensure that land access is lawful, technically durable, socially acceptable and consistent with the World Bank Environmental and Social Standard 5 (ESS5).

The Procedure applies where a proposed subproject would use:

land owned or lawfully controlled by the participating village;

land voluntarily made available by an individual, household or eligible collective rights holder;

land controlled by another government ministry, department, agency or subnational government entity under a negotiated use agreement;

existing rights of way, access corridors or other lawful use rights; or

land required temporarily for construction access, storage or work areas.

The Procedure also applies to associated impacts on structures, crops, trees, productive assets, access, natural resources and livelihood activities, whether or not ownership of the underlying land changes.

1.2 Project Land Access Policy

SEHATI will not finance involuntary land acquisition. Land required for a subproject must be secured through one of the permissible pathways in this Procedure. If compliant land access cannot be demonstrated before subproject approval, the subproject must be redesigned, relocated or rejected. Civil works must not commence until all required land documentation has been completed, independently verified where required, approved and recorded.

1.3 Relationship to Other Project Instruments

This Procedure should be read together with the ESMF, Stakeholder Engagement Framework (SEF), Indigenous Peoples planning provisions, Environmental and Social Commitment Plan, Project Operations Manual, subproject technical appraisal requirements and grievance mechanism. Where another instrument sets a higher standard, the higher standard applies.

INDONESIA / PROJECT-SPECIFIC WORK REQUIRED: Confirm the final suite and titles of SEHATI environmental and social instruments, and cross-reference the exact sections governing eligibility, Indigenous Peoples, labor, cultural heritage, community health and safety, and grievance management.

2. Legal, Institutional and Land Tenure Framework

2.1 World Bank Requirements

ESS5 requires projects to avoid involuntary resettlement where feasible; minimize unavoidable impacts; avoid forced eviction; mitigate unavoidable adverse social and economic impacts; improve or restore livelihoods and living standards; and ensure disclosure, meaningful consultation and informed participation. For SEHATI, the project design goes further by excluding involuntary land acquisition.

Voluntary land donation may be accepted only where the donor has a genuine power of choice and can refuse without retaliation, loss of eligibility or loss of access to project benefits. The project must confirm the donor is appropriately informed, understands the consequences, directly benefits from the subproject, and is not materially impoverished or displaced by the donation.

2.2 Indonesian Legal and Institutional Framework

INDONESIA / PROJECT-SPECIFIC WORK REQUIRED: Replace this placeholder with a verified analysis of national and subnational requirements governing: village assets; village treasury land; state and regional government property; private registered and unregistered land; adat or communal rights; land use agreements; easements and rights of way; transfer or change of use of village assets; documentation and registration; spousal or family consent; taxation and notarial requirements; dispute resolution; and authority to execute agreements. The analysis should identify gaps between Indonesian requirements and ESS5 and state how this Procedure fills them.

The final Procedure should describe the responsibilities of MoVDA, provincial and district governments, village governments, the Village Consultative Body, village facilitators, relevant land offices, technical agencies, project environmental and social personnel, and independent verifiers.

2.3 Working Land Categories

Category	Working definition for this draft	Required confirmation
Village land	Land legally owned, held, administered or controlled by a village and available for the proposed public or community purpose.	Confirm Indonesian categories, disposal/use restrictions, approval process and documentary evidence.
Other government land	Land controlled by a ministry, department, agency, province, district or other public entity outside the participating village.	Confirm authority to negotiate use and permissible agreement types and duration.
Private land	Land or land-use rights held by an individual, household, enterprise or other private rights holder.	Confirm acceptable evidence of rights, family consent and registration implications.
Adat / communal land	Land subject to recognized or claimed collective customary rights or use.	Confirm recognition, representative authority, inclusive consent and ESS7 interface.
Existing public right of way	A legally established corridor or use right sufficient for the proposed works.	Confirm width, permitted use, encroachment and residual private or community rights.

3. Anticipated Land Requirements and Exclusions

The Procedure is intended for small-scale village investments such as local access infrastructure, irrigation, water management, flood or erosion control, storage, aggregation, market, productive and community facilities. The precise investment menu and land footprint will be confirmed through project design and the subproject screening process.

3.1 Ineligible Land and Resettlement Impacts

A proposed subproject is ineligible where it would involve any of the following:

- involuntary acquisition, expropriation or compulsory transfer of land or land-use rights;
- physical displacement, relocation of a dwelling, or loss of residential shelter;
- permanent displacement of a business or livelihood activity;
- material loss of income or productive capacity that cannot meet the VLD criteria;
- forced removal of informal occupants or users;
- land subject to unresolved ownership, boundary, inheritance or use disputes;
- donation by a person who does not have the legal or socially recognized authority to make the land available;
- use of land essential to the subsistence, cultural identity or collective survival of an Indigenous Peoples or adat community without the applicable ESS7 process;
- a donation made under administrative, political, family, economic or social pressure; or
- an agreement whose duration is insufficient for the technical, financial, operational and maintenance feasibility of the subproject.

4. Land Access Hierarchy

Land options must be considered in the following order. The screening record must explain why each higher-priority option is available, unavailable or unsuitable.

Priority	Land access pathway	Core rule
1	Village land	First and preferred option. Confirm lawful village control, availability, absence of adverse users or claims, and long-term suitability.
2	Voluntary land donation	Permitted only where all VLD criteria are met, the donor directly benefits, impacts are minimal and choice is independently verified.
3	Negotiated use of other government land	May be used where the controlling government entity voluntarily agrees. The agreement must be legally valid and long enough to meet subproject feasibility, operation and maintenance requirements.
Not permitted	Involuntary land acquisition	No expropriation, compulsory acquisition or involuntary taking. Redesign, relocate or reject the subproject.

5. General Principles

- Avoid impacts first. Site selection and design must avoid adverse land, asset, access and livelihood impacts wherever practicable.
- Village land first. Available and suitable village land must be prioritized before seeking a private donation or land from another government entity.
- No involuntary acquisition. Refusal to donate or agree to land use must not affect a person's eligibility for project benefits or expose them to disadvantage.
- Rights, not labels. Due diligence must identify the actual ownership, use, access and resource rights affected, rather than relying only on how the transaction is described.
- Direct benefit. A private or collective rights holder donating land must be a direct and material beneficiary of the subproject.
- Minimal impact. VLD is limited to genuinely small impacts that do not undermine living standards, food security, housing, income or productive capacity.
- Inclusive decision-making. Women, spouses, co-rights holders, informal users, tenants, sharecroppers, vulnerable persons and relevant adat rights holders must be identified and consulted.
- Durable access. The land arrangement must remain valid throughout the period needed for construction, operation, maintenance and intended service delivery.
- Complete documentation. No works may start until screening, due diligence, consultation, agreement, verification and approval records are complete.
- No unresolved disputes. Disputed land cannot be used. A different site must be selected unless the dispute is fully and lawfully resolved before approval.

6. Land Access Screening and Site Selection

Every proposed subproject must complete a Land Access Screening Form before technical design is finalized. Screening must cover the full footprint of permanent and temporary works, including access, drainage, safety zones, spoil disposal, laydown areas and ancillary facilities.

- The screening must record:
- the proposed site, coordinates, map, photographs and approximate area;
- the proposed asset, ownership, operating entity, beneficiaries and intended service life;
- all alternative sites considered and the reasons for selecting the proposed site;
- the land category and documentary or community evidence of ownership and use rights;
- all owners, co-owners, occupants, users, tenants, workers, resource users and claimants;
- structures, crops, trees, water sources, natural resources and livelihood uses present;
- whether any person is vulnerable or may have reduced ability to refuse;
- whether Indigenous Peoples or adat rights or attachments may be affected;
- the proposed land access pathway and required documents; and
- whether the site meets the exclusion criteria.

INDONESIA / PROJECT-SPECIFIC WORK REQUIRED: Develop a standard georeferenced screening form compatible with the project MIS and village planning cycle. Define who prepares, verifies and approves it at village, district and central levels.

7. Procedure for Use of Village Land

7.1 Applicability

Village land is the first and preferred source of land. It may be used where the village has lawful authority to make the land available for the proposed purpose and the arrangement does not adversely affect individual or collective rights holders, occupiers, informal users or livelihood activities.

7.2 Minimum Due Diligence

Confirm the legal category, ownership or control of the land and the village's authority to authorize its use.

Confirm that the proposed use is permitted and that any required change of use, asset register entry, approval or registration has been completed.

Undertake a site inspection and identify all formal and informal users, encroachments, crops, structures, access routes and resource uses.

Confirm there are no unresolved ownership, boundary, inheritance or use disputes.

Confirm the land is not already committed to another public, community, cultural or livelihood purpose that would be compromised.

Confirm the land footprint and tenure period are sufficient for construction, operation, maintenance, replacement and safe public use.

Document the village decision through the applicable inclusive village deliberation and approval process.

Record the land, approved purpose, safeguards conditions and responsible asset manager in the relevant village and project records.

7.3 Village Decision-Making

The decision to use village land must be made through an open, documented and inclusive village process. Information provided in advance must cover the site, design, footprint, expected benefits, construction impacts, future ownership, operating responsibilities, access rules, maintenance obligations and grievance channels. The record must identify objections and how they were addressed. Silence or attendance at a meeting does not by itself constitute consent.

INDONESIA / PROJECT-SPECIFIC WORK REQUIRED: Confirm the required Musyawarah Desa, BPD and village government approvals; quorum and notice requirements; treatment of village treasury land and other village assets; signatory authority; public disclosure; and any district or higher-level endorsement.

8. Procedure for Negotiated Use of Other Government Land

8.1 Applicability

Land controlled by another government ministry, department, agency, province, district or public body may be considered where suitable village land is unavailable and the proposed government land is technically and socially preferable. Its use must be negotiated separately with the entity legally authorized to control and commit the land.

8.2 Due Diligence and Agreement Requirements

- Verify the controlling entity, land status, parcel boundaries, permitted use, encumbrances and authority of the proposed signatory.
- Confirm through site inspection that the land is not occupied or used by formal or informal users whose displacement or livelihood loss would result.
- Confirm the entity is acting voluntarily and that no third-party rights are overridden.
- Define the exact purpose, footprint, access arrangements, public use conditions, asset ownership, operation, maintenance and end-of-term arrangements.
- Specify an agreement period that is sufficient for subproject feasibility. The period must cover construction and the expected operational and maintenance life of the asset, with appropriate renewal, termination, handback and continuity provisions.
- Prevent unilateral termination or change of use that would make the subproject nonfunctional, strand project investment or interrupt intended community benefits.
- Allocate responsibility for registration, taxes or fees, utilities, insurance, maintenance, damage, restoration and dispute resolution.
- Obtain legal and technical clearance before subproject approval.

8.3 Feasibility Test for Agreement Duration

The technical appraisal must state the expected design life, operating period and maintenance assumptions for the proposed subproject. The land-use agreement must provide secure access for at least the period required to make the investment technically, financially and operationally feasible. A shorter or readily revocable agreement is not acceptable. Where renewal is contemplated, the original term and renewal mechanism must provide reasonable continuity and avoid dependence on an uncertain future discretionary decision.

INDONESIA / PROJECT-SPECIFIC WORK REQUIRED: The project technical team and Indonesian legal counsel should define minimum agreement periods by investment type and confirm the legally available instruments, approval levels, renewal rules, registration requirements and remedies for early termination.

9. Voluntary Land Donation

9.1 Definition and Limited Use

For SEHATI, VLD means a documented and independently verified voluntary agreement by a person, household or eligible collective rights holder to provide a clearly defined land ownership, use or access right for a specified subproject, without monetary compensation for the land right, where the donor is a direct beneficiary and all eligibility criteria below are satisfied. The transaction should be described by the actual right provided, such as permanent transfer, long-term use, easement, right of way or temporary access. The term “gift” should not substitute for a precise description of rights and duration.

9.2 Mandatory VLD Eligibility Criteria

All of the following criteria must be met. Failure of any criterion makes VLD ineligible.

Criterion	Required finding
Genuine power of choice	The donor can refuse without retaliation, loss of benefits, delay of unrelated services, reputational harm or pressure from officials, family, community leaders or other parties.
Direct benefit	The donor and affected household or rights-holding group will directly and materially benefit from the subproject. General village benefit alone is insufficient where the donor bears a disproportionate private cost.
Alternatives	Technically feasible alternative sites or designs have been identified and discussed. The donor’s refusal would lead to use of an alternative, redesign or rejection, not coercion.
Minimal land impact	As an initial ceiling, the donation must not exceed 10 percent of the donor household’s productive landholding and must not render the remaining land economically unviable, inaccessible, unsafe or fragmented. A lower threshold must be applied where vulnerability, small holdings, food security or cumulative losses warrant it.
Minimal asset impact	No donor or user may lose more than 10 percent of productive assets or productive capacity. Impacts on crops, trees, structures, water, access and natural resources must be counted, including prior project-related contributions.
No physical displacement	No dwelling, shelter or residential structure will be relocated or made unusable.
No material economic displacement	There will be no permanent business relocation, material income loss, loss of primary livelihood, or restriction of access essential to livelihood or subsistence.
Clear rights and authority	All owners, co-owners, spouses, heirs, occupants, users and collective rights holders have been identified. The donor has the authority to provide the specific right and the land is free of unresolved disputes.
Informed decision	The donor understands the subproject, alternatives, exact boundaries, right and duration provided, construction impacts, future use, restrictions, benefits, risks, grievance options and the consequences for heirs and successors.
Inclusive consent	All persons whose rights or livelihoods are affected have been consulted separately where needed. Consent is not based solely on a village leader’s or household head’s signature.
No payment substitution	VLD is not used to avoid compensation, legal acquisition procedures or project costs, and no unofficial payment, inducement or conditional benefit is offered.
Independent verification	A person independent of the village approval and subproject promotion process verifies ownership or rights, voluntariness, understanding, absence of coercion, direct benefit and minor impact.
Documented and durable arrangement	The agreement precisely identifies the land, right, purpose, duration, parties, access, asset ownership, maintenance, restrictions, grievance process and any handback arrangements and is legally effective for the required subproject life.
Right to withdraw before finalization	The donor has a clearly communicated opportunity to decline or withdraw before the agreement is finalized and before works start, without adverse consequences.

9.3 VLD Is Not Permitted Where:

- the donor or any co-rights holder does not agree, cannot be located, lacks capacity to decide, or is not adequately represented;
- the land is disputed, mortgaged or encumbered in a manner inconsistent with the subproject;
- the donor is an employee, contractor, official or politically dependent person and voluntariness cannot be credibly established;
- the donor is poor or vulnerable and the contribution could materially affect food security, housing, income, debt, resilience or future options;
- the subproject primarily benefits a government agency, private enterprise or persons other than the donor and community;
- the contribution is for medium- or large-scale infrastructure or a service that a public authority is legally required to provide and the donation would shift a disproportionate public cost to an individual;
- alternative locations have not been meaningfully considered;
- informal users, tenants, workers, sharecroppers or resource users would lose assets, access or livelihoods;
- the proposed agreement is ambiguous, revocable at will, or shorter than the period required for feasibility; or
- the land has cultural, spiritual or collective significance requiring a different consultation or consent process.

9.4 VLD Process

Step	Minimum action
Initial site and alternatives assessment	Define the land need, minimize footprint, identify alternatives and confirm village land has been considered first.
Rights and use due diligence	Identify the land category, right being provided, all rights holders and users, boundaries, assets, encumbrances and disputes.
Impact and vulnerability assessment	Measure land and asset losses against total holdings and productive capacity; assess cumulative impacts and vulnerability.
Disclosure and consultation	Provide understandable information in the appropriate language and format; consult donors, spouses, co-rights holders and users without the presence of persons who may exert pressure where needed.
Cooling-off and decision period	Allow a reasonable period for questions, family discussion, independent advice and withdrawal before signing.
Independent verification	Complete the verification interview and site check before agreement approval.
Written agreement and mapping	Sign an agreement with parcel map, coordinates, photographs, asset inventory, consultation record, signatories and witness verification.

Step	Minimum action
Approval and record keeping	Approve through designated project authority and retain records in village, district and project systems.
Pre-works check	Confirm the site remains dispute-free, the donor continues to agree, and all conditions are fulfilled before possession or works.
Monitoring	Check that boundaries are respected, no additional land or assets are taken, access is maintained, and grievances are resolved.

INDONESIA / PROJECT-SPECIFIC WORK REQUIRED: Define the mandatory cooling-off period, independent verifier profile, approval levels, documentary evidence acceptable for registered and unregistered rights, and whether particular VLD transactions require land office, notarial or district review.

10. Voluntary Provision of Assets, Access or Use Rights

A land arrangement may affect crops, trees, structures, water sources, access routes, fishing or gathering areas, business space or other productive assets even when little or no land ownership is transferred. Such impacts must be screened and assessed separately. The same voluntariness, direct benefit, alternatives, minimal impact, informed decision, documentation and independent verification tests apply.

Where an affected asset or use belongs to someone other than the landowner, that person's separate agreement is required. A landowner cannot donate another person's asset, tenancy, labor, access or livelihood right. If the impact is not genuinely voluntary and minimal, the site or design is ineligible and must be changed.

11. Temporary Land Use During Construction

Temporary land use must be minimized and should use village land where feasible. Any use of private or other government land requires a written agreement defining the area, period, purpose, access, safety controls, payment or other agreed terms, restoration standard, liability for damage and return condition. Contractors may not negotiate undocumented access directly with landholders or expand beyond approved boundaries.

Temporary arrangements must not involve physical displacement, material livelihood loss or unresolved disputes. Damage to crops, assets or land beyond the agreed voluntary contribution must be repaired or compensated in accordance with project requirements.

12. Consultation, Disclosure and Protection Against Coercion

Consultation must begin before site selection is final and continue through agreement and implementation. Information must be understandable and accessible, including to persons with low literacy or limited Indonesian language proficiency. Consultation records must identify who attended, who holds rights, issues raised, dissent, alternatives considered and decisions made.

The following safeguards against coercion apply:

- meet privately with the donor and affected spouse or co-rights holders where appropriate;
- do not rely only on statements by village leaders or project proponents;
- state clearly that refusal has no penalty and does not affect unrelated benefits;
- identify power relationships, debts, political pressures, family dependencies or administrative influence;
- provide the grievance channel and a confidential means to report pressure;
- allow time to obtain independent advice; and
- require independent verification before signature or approval.

13. Independent Verification

The verifier must be independent of the person promoting the subproject, the approving village authority and the beneficiary of the land arrangement. Verification must include a site visit, review of ownership and use evidence, separate discussion with affected parties where appropriate, and confirmation that all criteria are met.

The verifier must certify or reject the transaction. Conditional certification is permitted only where clearly specified documentary or procedural actions can be completed before approval. The verifier must not certify land that is disputed or where voluntariness, authority, impact or agreement duration is uncertain.

INDONESIA / PROJECT-SPECIFIC WORK REQUIRED: Identify a practical verifier model for a program operating across many villages. Options for project consideration may include trained district safeguards staff, qualified facilitators not assigned to the proposing village, land office personnel where appropriate, or an independent third-party panel, with risk-based escalation for complex cases.

14. Documentation and Approval

The complete land file must include, as applicable:

- Land Access Screening Form and alternatives analysis;
- site map, coordinates, photographs and measured area;
- evidence of village ownership/control, government control, or private/collective rights;
- list of owners, co-rights holders, users and affected assets;
- consultation notices, attendance, minutes and disclosure materials;
- vulnerability and impact assessment;
- village resolution or approval;
- government land-use agreement or VLD agreement;
- spousal, co-owner, user and collective consent records as applicable;
- independent verification certificate;
- technical confirmation that agreement duration meets feasibility needs;
- grievance records and resolutions; and
- pre-works clearance.

No subproject may receive final approval or commence works with an incomplete land file.

15. Grievance Management

Land grievances may be submitted through the project grievance mechanism or other lawful channels without retaliation. Complaints may concern ownership, boundaries, inheritance, exclusion from consultation, coercion, asset impacts, access, agreement terms, agreement duration, construction encroachment or restoration.

Where a complaint raises a credible ownership or voluntariness concern, approval and works affecting the land must pause. Mediation may be used where voluntary and appropriate, but the project must not attempt to settle complex title disputes as a condition for proceeding. If the dispute is not fully resolved, an alternative site must be selected or the subproject rejected.

INDONESIA / PROJECT-SPECIFIC WORK REQUIRED: Align timelines, escalation, confidentiality, appeal and documentation requirements with the final SEHATI grievance mechanism and applicable Indonesian dispute resolution institutions.

16. Roles and Responsibilities

Actor	Indicative responsibility	Confirmation needed
Village government	Identify village land first; organize inclusive decision-making; maintain local records; prevent works before clearance.	Legal authority, signatories and village asset requirements.
BPD / village representative body	Provide oversight and represent community interests in the applicable village process.	Exact statutory role and approval requirement.
Village facilitator	Support screening, alternatives, consultation and documentation without promoting donation.	Scope, training, conflicts and supervision.
District project unit	Review land files, verify eligibility, coordinate technical and land authorities, approve or escalate.	Formal mandate, staffing and thresholds.
Land office / relevant authority	Verify land status or rights and advise on registration where applicable.	Required versus advisory involvement by transaction type.
Technical team	Confirm footprint, alternatives, design life and minimum agreement duration.	Asset-specific feasibility standards.
Independent verifier	Confirm rights, voluntariness, direct benefit, minor impact and informed agreement.	Verifier model and accreditation.
Central PMU / MoVDA	Issue guidance, maintain MIS, train, monitor, audit and report to the Bank.	Final institutional arrangements.
Contractor	Use only approved land; respect boundaries; restore temporary areas; report incidents.	Contract clauses and supervision arrangements.

17. Monitoring, Reporting and Audit

The project MIS should track each land arrangement by subproject, location, land category, area, right provided, duration, donor or controlling entity, affected assets and users, vulnerability, verification status, agreement date, grievances, pre-works clearance and monitoring findings.

Monitoring should include:

- sample field verification of village land cases and all higher-risk VLD or government land agreements;
- confirmation that works remain within approved boundaries;
- confirmation that donors and users experience no unrecorded impacts;
- review of agreement continuity, renewal dates and operating access;
- sex-disaggregated and vulnerability-sensitive review of consultation and consent;
- grievance trends and corrective actions; and
- periodic audit of land files and verifier quality.

18. Training and Implementation Support

Training should emphasize that VLD is an exception, not a target or demonstration of community commitment. Staff and facilitators should be trained to distinguish land ownership from use and access rights; identify informal and secondary users; assess productive impacts and cumulative loss; recognize coercion and vulnerability; evaluate agreement duration; document alternatives; and stop ineligible transactions.

Annex 1. Land Access Screening Form - Minimum Fields

Topic	Minimum information
Subproject	Name, code, type, location, proponent, beneficiaries, asset owner/operator.
Footprint	Permanent and temporary area, coordinates, map, photos, access and ancillary areas.
Alternatives	Village land options considered, design alternatives, reasons for site selection.
Land status	Category, owner/controller, evidence, boundaries, encumbrances and disputes.
Rights and users	Owners, spouses, co-owners, heirs, tenants, informal users, resource users, adat rights holders.
Assets and livelihoods	Structures, crops, trees, businesses, water, access, common resources and productive uses.
Vulnerability	Poverty, disability, age, gender, dependency, small holdings, food insecurity or limited power to refuse.
Pathway	Village land, VLD or negotiated other government land; documents and approvals required.
Eligibility decision	Eligible, redesign required, alternative site required, or ineligible; reasons and signatures.

Annex 2. Village Land Due Diligence Checklist

- ☐ Village's legal ownership or control is evidenced and verified.

- ☐ Proposed use is legally permitted and approvals are identified.
- ☐ No private, informal, tenant, customary or livelihood user will be displaced or adversely affected.
- ☐ No unresolved ownership, boundary, inheritance or use dispute exists.
- ☐ Land is not required for an existing community, livelihood, cultural or public function that would be impaired.
- ☐ Village deliberation is inclusive, documented and valid.
- ☐ Asset ownership, public access, operation and maintenance are defined.
- ☐ Land area and duration are sufficient for feasibility and safe operation.
- ☐ Map, coordinates, photographs and land record entry are complete.
- ☐ Pre-works clearance is signed.

ANNEX 3. VLD Agreement - Minimum Content

The final agreement should contain at least:

- identity and contact details of donor(s), spouse(s), co-rights holders, users and witnesses;
- description and evidence of the donor's right and authority;
- precise description, map, coordinates and area of land;
- inventory and ownership of assets, crops, trees and uses;
- exact right provided, purpose, recipient, duration and conditions;
- statement of direct benefit and alternatives considered;
- confirmation that refusal carries no penalty and that the decision is free of coercion;
- confirmation that impacts meet the minimal land and asset thresholds and do not cause displacement;
- future ownership, access, operation, maintenance and restrictions;
- construction access and restoration terms;
- grievance contacts and dispute provisions;
- conditions for modification, termination, handback or succession;
- consultation record and independent verification certificate; and
- signatures or other legally valid evidence of agreement by all required parties.

INDONESIA / PROJECT-SPECIFIC WORK REQUIRED: Prepare legally reviewed Bahasa Indonesia templates for permanent land use/transfer, easement or right of way, long-term use, and temporary access. Avoid a single generic "donation" form where different rights and durations are required.

Annex 4. Independent Verification Certificate - Core Questions

☐ Did the verifier meet the donor and affected co-rights holders without persons who may exert pressure?

☐ Can the donor refuse without loss of project or government benefits?

☐ Is the donor a direct and material beneficiary?

☐ Were feasible alternative sites or designs explained?

☐ Are the land right, boundaries, duration and future use understood?

☐ Are all owners, spouses, users and claimants identified and in agreement?

☐ Is the land free of dispute and material encumbrance?

☐ Are land, asset, access and cumulative impacts accurately recorded and minimal?

☐ Would the transaction affect food security, housing, income, resilience or a vulnerable person?

☐ Does the written agreement match the actual understanding of the parties?

☐ Is the duration adequate for subproject feasibility?

☐ Does the verifier certify the arrangement, reject it, or require specified actions before certification?

Annex 5. Government Land Use Agreement - Minimum Content

legal identity of controlling entity and authority of signatory;

land status, parcel description, map, permitted use and absence of conflicting users or claims;

purpose and exact subproject footprint;

agreement term aligned with design life, operation and maintenance feasibility;

public and community access conditions;

asset ownership, operation, maintenance, replacement and insurance responsibilities;

prohibition or control of unilateral termination, competing use or disposal;

renewal, extension, early termination, remedy, compensation for stranded investment where legally permissible, and handback;

fees, taxes, registration and administrative responsibilities;

construction access, utilities, safety, restoration and damage;

dispute resolution and governing law; and

legal and technical clearances.

Annex 6. Matters Requiring Further Project and Indonesia-Specific Work

Priority	Issue	Required output
Critical	Legal categories and authority for village land	Legal note and documentary evidence matrix.
Critical	No-acquisition exclusion	Consistent wording in ESMF, ESCP, POM, eligibility and financing documents.
Critical	Government land agreement duration	Asset-specific minimum terms and legally valid template.

Priority	Issue	Required output
Critical	VLD thresholds and cumulative impacts	Validated thresholds, vulnerability override and calculation guidance.
Critical	Adat / collective rights and ESS7 interface	Decision tree, representative authority and consent requirements.
High	Village deliberation and approval	Musyawarah Desa/BPD process, notice, quorum, records and disclosure.
High	Independent verification model	Roles, qualifications, conflicts, escalation and financing.
High	Evidence for registered/unregistered rights	Acceptable evidence and land office/notarial involvement matrix.
High	Agreement templates	Bahasa Indonesia forms by right type and land category.
High	MIS and pre-works clearance	Fields, workflow, document retention and audit protocol.
Medium	Temporary land and contractor controls	Contract clauses, restoration form and incident protocol.
Medium	Training package	Case-based modules for village, facilitator, district and verifier roles.

ANNEX VII: Social Conflict Analysis

This annex provides a conflict-sensitive framework for screening, planning, implementing, and monitoring SEHATI investments in rural Indonesia. It addresses both pre-existing tensions that may affect implementation and tensions that may be created or intensified by project decisions. It applies to the five indicative packages: *Agroprocessing Hijau*; *Akuakultur dan Perikanan*; *Ekowisata Hijau*; *Ketahanan Pangan*; and *Peternakan*.

The central requirement is that project resources, assets, employment, access arrangements, and benefits are allocated through transparent and inclusive processes, with documented decisions and accessible grievance channels. Conflict risk is location-specific and can change during implementation. Every proposed investment therefore requires screening, proportionate mitigation, and monitoring rather than assumptions based only on district or village-level profiles.

Risk of Conflict and Project Challenges

Social Conflict Analysis

SEHATI will operate through decentralized investments across approximately The 6,085-entry longlist will be screened to target approx. 5,000 villages, using participatory planning, village-level implementation, productive infrastructure, and grants for productive tools and equipment. These features can strengthen cooperation and local resilience, but they also create distributional choices concerning project locations and beneficiaries, access to economic opportunities, and the management of assets and revenues. Such choices can become conflict drivers when these decisions are not made transparently and fairly, are politically influenced, or are inconsistent with formal, customary or livelihood rights. The objectives of this annex are thus to:

- identify existing tensions, power relations, and conflict-resolution mechanisms relevant to each proposed investment;
- assess whether SEHATI could exacerbate exclusion, inequality, insecurity, or disputes within or between villages;
- assess whether conflict, intimidation, criminality, or social unrest could disrupt the implementation of SEHATI;
- define proportionate measures to avoid, reduce, monitor, and respond to conflict risks; and
- protect community members, workers, facilitators, government personnel, operators, and project assets.

The Project is not expected to resolve long-standing political, inter-group, land, or resource conflicts that fall outside its mandate. It must, however, avoid worsening them, refrain from using project funding as leverage in unresolved disputes, and coordinate with competent authorities and legitimate community mechanisms where safe and appropriate.

Indonesia's villages vary widely in geography, social organization, livelihood systems, administrative capacity, and the role of customary institutions. Conflict patterns must therefore be assessed for each location. Relevant dynamics may include competition connected to village leadership and elections; unequal influence over Musyawarah Desa processes; disputed village or customary boundaries; overlapping formal and customary rights; disagreements between village government, BPD, BUM Desa, cooperatives, producer associations, and existing private operators; and competition over resources, tourism sites, markets, and employment.

Sources of Conflict

Cross-cutting sources of conflict

Potential source	How it may arise in SEHATI
Selection and expectations	Unclear village, group, or beneficiary selection; expectations created by proposal preparation; comparisons with neighboring villages; changing criteria or delays.
Elite capture and political influence	Dominant families, village elites, political actors, or institution leaders influence decisions, employment, procurement, asset access, or revenue distribution; project benefits are used for patronage or election-related advantage.
Participation and representation	Musdes or consultations exclude or silence marginalized communities, including but not limited to women, youth, persons with disabilities, poorer households, minority groups, remote hamlets (*dusun*), migrants, or livelihood users; attendance records overstate meaningful participation.
Land, boundaries, and access	Ownership, inheritance, customary tenure, informal use, tenancy, easements, access routes, or village boundaries are contested; users are affected even when they are not registered owners.
Natural resources	Competing uses of water, fisheries, forests, grazing areas, coastal space, or other resources; upstream and downstream impacts; seasonal scarcity; project restrictions on customary or livelihood access.
Employment and procurement	Perceived favoritism in hiring, wage rates, contractor selection, purchase of materials, or choice of suppliers; non-local labor or contractors displace local opportunities; unsafe or abusive conduct.
Asset control and benefit sharing	Disagreement over ownership, operator appointment, user eligibility, schedules, fees, maintenance contributions, revenues, or distribution of productive benefits; BUM Desa or group management is not transparent.
Institutional overlap	Unclear authority among village government, BPD, BUM Desa, cooperatives, producer associations, customary leaders, district agencies, and project facilitators; competing claims to manage the same asset or activity.
Environmental and community impacts	Dust, noise, odor, traffic, waste, water pollution, disease, safety hazards, or loss of privacy affect nearby households and trigger disputes over responsibility and remedy.
Information and misinformation	Inconsistent messages about funding, compensation, eligibility, or ownership; rumors spread through social media or informal networks; technical information is not provided in accessible language.

Potential source	How it may arise in SEHATI
Grievance barriers and retaliation	People do not know how to complain, fear consequences, lack confidential channels, or believe village-based mechanisms are controlled by a party to the dispute.
External insecurity	Crime, theft, vandalism, political unrest, inter-group tensions, or disasters restrict access, endanger staff and communities, delay work, or damage assets.

Package-specific sources of conflict

Green Agroprocessing

Conflict source	Potential implications
Site and facility location	Disputes over land rights, access, noise, traffic, or the concentration of facilities in one hamlet (*dusun*); delays or opposition to construction.
Supplier and crop selection	Perceived exclusion of particular commodities, producers, or hamlets (*dusun*); favoritism in purchase volumes, quality grading, and prices.
Equipment access	Conflict over booking priority, tariffs, operator selection, downtime, and liability for damage; capture by better-connected businesses.
Competition with existing businesses	Crowding out or displacement of existing livelihoods; resistance to BUM Desa market entry or subsidized pricing.
Jobs and enterprise governance	Allegations of nepotism in jobs and management positions; disputes over wages, revenue use, and accountability.
Waste, water, and energy	Odor, wastewater, solid waste, noise, or high water use affects neighbors; disagreement over solar energy use or maintenance costs.

Aquaculture and Fisheries

Conflict source	Potential implications
Water and fishing rights	Overlapping formal, customary, seasonal, or livelihood claims to ponds, rivers, lakes, coasts, landing sites, and fishing grounds.
Siting and access	Jetties, access roads, ponds, or waste facilities restrict routes, landing access, drainage, or agricultural land; inter-village boundary disputes.
Asset and beneficiary selection	Conflict over who receives boats, gear, cold-chain access, or group membership; exclusion of small-scale or unregistered users.

Conflict source	Potential implications
Competing resource uses	Aquaculture changes water flows or quality; upstream activities affect downstream users; gear types or fishing intensity create tension.
Market and value-chain control	Disputes over landing fees, first-sale arrangements, pricing, storage priority, and displacement of existing traders.
Environmental and safety impacts	Waste, feed, chemicals, fuel, navigation hazards, or stock escape triggers complaints; theft or vandalism of boats and equipment.

Green Ecotourism

Conflict source	Potential implications
Attraction and site control	Disputes over ownership or authority over forests, beaches, waterfalls, sacred places, cultural sites, trails, and scenic areas.
Commercial use of culture and knowledge	Unauthorized use or unequal commercialization of cultural heritage, images, performances, stories, or traditional knowledge.
Selection of tourism businesses	Benefits concentrate among households with capital, location, or political connections; existing operators are displaced.
Fees and revenue sharing	Conflict over ticketing, parking, concessions, revenue distribution, inter-village claims, and contributions to conservation or community services.
Visitor conduct and community privacy	Tension over alcohol, dress, photography, noise, access to residential areas, sacred places, or culturally inappropriate behavior.
Resource pressure and access	Tourism increases waste, water demand, traffic, or restrictions on customary, communal or residential access; benefits are contested if environmental costs fall on non-beneficiaries.

Food Security

Conflict source	Potential implications
Allocation of water	Irrigation, ponds, pumps, or water storage alter timing and quantity of water; scarcity intensifies disputes across farms, hamlets (*dusun*), or villages.
Land and infrastructure siting	Farm roads, storage, drying floors, *embung*, and irrigation require land or easements and may interrupt access, drainage, or livelihoods.
Farmer and beneficiary selection	Support favors larger landowners, formal group members, or particular crops; landless and informal producers receive few benefits.

Conflict source	Potential implications
Shared machinery and facilities	Disputes over schedules, fees, fuel, maintenance, liability, priority during peak seasons, and use by non-members.
Storage, pricing, and market power	Control of village storage or processing affects purchase prices, stock release, and trader livelihoods; allegations of hoarding or preferential access.
Climate and emergency pressure	Drought, flood, pest outbreaks, or price shocks reduce available resources and heighten expectations about priority access and emergency support.

Livestock

Conflict source	Potential implications
Collective housing and grazing	Disputes over shed location, communal or private land, grazing routes, and crop damage by animals.
Animal and input allocation	Perceived favoritism in group membership, animals, feed equipment, veterinary support, or replacement of lost stock.
Waste and nuisance impacts	Odor, flies, noise, manure, wastewater, and carcass disposal affect neighbors or water sources; disagreement over monitoring and remedy.
Disease and biosecurity	Movement restrictions, quarantine, culling, vaccination, or disease attribution create losses and disputes, including over compensation outside the Project's control.
Biogas and shared facilities	Conflict over feedstock responsibilities, gas allocation, user fees, safety rules, maintenance, and liability for accidents.
Market and theft risks	Price-setting, collective sales, stock records, theft, or loss of animals undermines trust and may lead to accusations among members.

Implications for the Project

Unmanaged conflict may lead to:

- safety risks, threats, intimidation, retaliation, or violence affecting community members, workers, facilitators, officials, or operators;
- exclusion of affected people from consultations, decisions, employment, services, or productive opportunities;
- delays, suspension, redesign, relocation, or cancellation of investments;
- damage, theft, sabotage, or underuse of project-funded assets;
- temporary or longer-term loss of access, livelihoods, trust, or cooperation;

- grievances, administrative disputes, litigation, or reputational harm;
- elite capture, weak accountability, and inequitable distribution of costs and benefits; and
- poor operation and maintenance after project support ends.

SEHATI may also strengthen social cohesion where planning is genuinely inclusive, investments respond to shared priorities, benefit-sharing rules are trusted, and groups cooperate to operate and maintain common assets. Such opportunities should be identified during analysis but should not be assumed or used to minimize documented risks.

Measures to Address Conflict Risks

Proposed Measures to Address Conflict

The following project features provide an initial basis for conflict risk management:

- transparent, data-driven selection of districts and villages, with documented criteria and validation;
- participatory village investment planning through Musyawarah Desa and integration into RKPDes and APBDes;
- requirements for the participation of women, youth, marginalized groups, and affected resource users;
- environmental and social screening, exclusion criteria, proportionate instruments, and clearance before activities proceed;
- land and site readiness, including evidence that land use is legitimate, voluntary where applicable, and not under unresolved dispute;
- technical and administrative appraisal by district and project institutions;
- clear asset ownership, operator, user, fee, cost-recovery, and operation and maintenance arrangements;
- district supervision, monitoring platforms, traceable records, and performance-linked financing; and
- an accessible GRM operating from village to central level, including escalation and confidential handling of sensitive complaints.

These features are necessary but are not, by themselves, proof that conflict risk has been addressed. Their implementation must be verified through consultation records, decision documentation, direct feedback from affected groups, site observation, grievance data, and follow-up monitoring.

Cross-cutting measures

Decision point	Required measure
Project entry and screening	Review recent conflict events and existing disputes; map affected and influential actors; identify groups that may bear costs or be excluded; assess election timing, resource scarcity, and cross-boundary effects before confirming the investment concept.

Decision point	Required measure
Information disclosure	Explain funding source, eligibility, limits, selection stages, compensation rules, labor arrangements, ownership, and GRM in clear Indonesian language and locally accessible formats. Correct rumors promptly and use consistent messages at village, district, and central levels.
Inclusive consultation	Use Musyawarah Desa together with targeted consultations where needed. Consult affected owners; users; tenants; marginalized groups, including but not limited to women, youth, poorer households, persons with disabilities, customary groups; and neighboring communities. Record dissent as well as support.
Transparent selection	Publish objective criteria for beneficiaries, groups, operators, jobs, suppliers, and facility access. Apply conflict-of-interest declarations and documented scoring. Explain unsuccessful decisions and provide review or grievance options.
Land and resource access	Verify formal and legitimate customary or use rights, boundaries, access routes, seasonal users, and competing claims. Do not proceed on disputed land or through coercive donation. Follow the Land Access Procedure and applicable Indigenous Peoples requirements.
Employment and procurement	Disclose labor needs, recruitment method, wage rates, local labor opportunities, procurement method, and supplier criteria. Apply the LMP, worker code of conduct, OHS requirements, and worker grievance mechanism.
Asset and benefit governance	Agree and disclose ownership, operator selection, user eligibility, schedules, tariffs, exemptions, revenues, maintenance contributions, audit, and sanctions. Include mechanisms for women, youth, vulnerable users, and non-members to access shared assets where relevant.
GRM and mediation	Provide multiple entry points, confidential and anonymous options where feasible, non-retaliation safeguards, case tracking, status updates, and appeal or escalation. Local mediation may supplement but shall not replace the Project GRM or access to administrative and judicial remedies.
Safety and security	Assess threats before site visits and works. Adjust timing, route, staffing, or meeting format. Avoid project-supported security arrangements unless risks, rules of conduct, proportionality, and oversight have been assessed under applicable project requirements.
Adaptive management	Monitor early-warning indicators and revisit analysis when elections, disasters, price changes, conflict incidents, protests, leadership changes, design changes, or grievances alter risk. Modify, relocate, suspend, or cancel activities where risk cannot be managed.

Package-specific measures

Green Agroprocessing

Risk area	Required measure
Facility siting	Compare feasible sites; verify land and access rights; consult nearby households and existing users; document nuisance buffers, traffic routes, and remedy commitments.
Supplier inclusion	Publish crop, volume, quality, and price-setting rules; allow participation by smallholders and women producers; explain rejected deliveries and provide a review channel.
Equipment and jobs	Use transparent booking, tariffs, operator recruitment, and conflict-of-interest rules; publish maintenance downtime and liability arrangements.
Existing businesses	Map existing processors, traders, and kiosks; assess displacement risk; consider service gaps, complementary roles, open access, or phased introduction rather than automatic replacement.
Revenue governance	Define the roles of village government, BPD, BUM Desa, groups, and operators; disclose revenue, costs, profit allocation, and oversight arrangements.
Nuisance and pollution	Set operational limits and procedures for water, wastewater, waste, odor, noise, traffic, and solar or battery management; assign complaint response responsibilities.

Aquaculture and Fisheries

Risk area	Required measure
Rights and boundaries	Conduct participatory mapping of water bodies, landing sites, routes, seasonal use, formal permits, and customary rights. Consult adjacent and upstream/downstream communities.
Asset selection	Publish eligibility and scoring for boats, gear, ponds, storage, and group access. Recognize women in processing and trade and small-scale or informal users where eligible.
Water and ecosystem use	Agree water abstraction, discharge, stocking, feed, gear, and seasonal operating rules consistent with technical and E&S requirements; monitor effects on other users.
Landing and market access	Define non-discriminatory schedules and fees for jetties, storage, transport, and sales; assess impacts on existing collectors and traders.
Inter-village impacts	Use Musyawarah Antar Desa or another documented inter-village process for shared waters, access roads, or facilities; specify roles, costs, benefits, and dispute handling.
Asset security and safety	Establish transparent custody, inventory, navigation safety, fuel storage, and loss-reporting arrangements without collective punishment or unsupported accusations.

Green Ecotourism

Risk area	Required measure
Site and cultural rights	Map ownership, customary stewardship, sacred or restricted sites, intellectual and cultural property interests, and permitted visitor access. Apply chance-find and cultural heritage requirements.
Business opportunities	Use open criteria for homestays, kiosks, guides, transport, and jobs; provide pathways for households lacking capital and for women, youth, and remote hamlets (*dusun*).
Revenue sharing	Agree ticket, parking, concession, conservation, community, customary custodian, and inter-village shares before operation; publish receipts and expenditure summaries.
Visitor conduct	Develop community-endorsed visitor rules covering photography, sacred places, dress, alcohol, waste, noise, privacy, and reporting of misconduct; train operators and guides.
Access and carrying capacity	Avoid unjustified restrictions on customary or livelihood access; assess water, traffic, waste, and visitor limits; provide alternatives or mitigation for affected users.
Neighboring villages	Where an attraction or route spans boundaries, agree branding, management, revenue, conservation duties, and grievance handling through a documented inter-village process.

Food Security

Risk area	Required measure
Water allocation	Map water sources, flows, rights, seasons, domestic needs, and upstream/downstream users. Agree transparent allocation, drought rules, monitoring, and a neutral escalation route.
Land and access	Verify land, easements, drainage, and livelihood use for roads, *embung*, irrigation, storage, and drying areas. Do not start works before E&S requirements are cleared.
Inclusive farmer access	Do not equate land title or formal group membership with all legitimate users. Assess tenants, sharecroppers, women farmers, landless workers, and remote plots; define equitable eligibility.
Peak-season assets	Publish booking priority, service standards, fees, fuel and maintenance rules for machinery, drying, milling, and storage; monitor peak-season access.
Storage and pricing	Separate public food-security functions from commercial operations where relevant; publish purchasing, grading, storage, and stock-release rules; prevent preferential sales and hidden fees.
Climate shocks	Predetermine fair emergency operating rules for drought, flood, pests, or price shocks and coordinate with competent disaster and food-security authorities.

Livestock

Risk area	Required measure
Siting and grazing	Map housing, grazing, fodder, routes, crops, neighbors, water sources, and prevailing winds; agree fencing and compensation or remedy procedures for verified damage outside excluded impacts.
Group and animal allocation	Publish eligibility, animal ownership, offspring, replacement, sale, and exit rules; include women and youth producers; identify conflicts of interest.
Nuisance management	Set manure, wastewater, odor, fly, carcass, and noise controls; designate monitoring and rapid response; relocate or modify operations if agreed thresholds cannot be met.
Disease response	Agree reporting, quarantine, movement, vaccination, and biosecurity roles with veterinary authorities. Communicate clearly that any compensation depends on applicable government and project rules.
Biogas governance	Define feedstock duties, gas access, fees, safety procedures, maintenance, emergency shutdown, and liability; train all operators and users.
Theft and sales	Maintain individual and collective stock records, witnessed transfers, transparent weighing and pricing, and a fair investigation process that avoids retaliation or collective blame.

Information Gathering and Mitigation Planning

Objective

Information gathering will establish a current, location-specific understanding of conflict risks, identify people who may be excluded or adversely affected, and determine the measures needed before financing, construction, equipment transfer, or operation. It should also identify legitimate and trusted mechanisms that may support dispute prevention or resolution, while preserving access to Project GRM and formal remedies.

Approach and Methods

The assessment should combine appropriate methods rather than rely on a single meeting or source:

- desk review of village plans, land and asset records, previous grievances, relevant permits, public information, and recent incident data;
- key-informant interviews with Village Governments (Pemerintah Desa), Village Consultative Bodies (BPD), Village-Owned Enterprises (BUM Desa), village facilitators, local producer associations, women's groups, and youth groups;
- separate focus groups or interviews for groups who may not speak freely in public forums;
- participatory mapping of land, water, routes, seasonal resource use, facilities, neighboring communities, and conflict-sensitive sites;

- seasonal and livelihood analysis to identify peak demand, migration, harvest, fishing, grazing, tourism, drought, and election-related periods; and
- triangulation of contested information, without publishing names or allegations that could expose people to retaliation.

Project Management Unit (PMU) and E&S personnel shall explain the purpose and voluntary nature of consultation, obtain consent before recording personal information, and store sensitive records with restricted access. Group labels shall not be used in ways that stigmatize communities. Meetings shall not be convened where attendance would create a credible safety or retaliation risk. The PMU may also engage a conflict risk specialist to assist with this.

Timing

Information gathering and mitigation planning shall be conducted during the planning and early implementation stages of the project. The process shall take place at four key points:

- **During proposal preparation:** Action includes conducting the initial context review, stakeholder mapping and consultations before the activity, location, operator and beneficiaries are finalized.
- **Before approval and implementation:** Action includes completing the conflict-risk assessment, verify land and resource rights, agreeing on mitigation measures and confirming that the GRM is accessible.
- **During early construction and operation:** Action includes monitoring grievances, access to assets and benefits, employment, environmental impacts and emerging tensions.
- **When circumstances change:** Assessment shall be repeated and updated following serious complaints, disputes, threats, protests, leadership changes, design changes, disasters or other significant events.

Output

A summary report documenting consultation findings, existing and potential social conflict risks, relevant stakeholders and conflict-management mechanisms, and recommendations and next steps for strengthening project design and risk management. The report shall identify high-risk areas and issues requiring further activity-specific assessment, together with any immediate mitigation, monitoring, or escalation actions.

Indicative Questions to Use During Consultations

General questions for all activity packages

- What social groups, hamlets (*dusun*), customary communities, livelihood groups, and other relevant stakeholders exist in the target area?
- What existing or recent conflicts and community tensions have occurred, and what effects have they had?
- Are there unresolved or latent tensions related to land, natural resources, customary rights, political affiliation, identity, livelihoods, public services, or village boundaries?
- Which locations, groups, or relationships are most exposed to conflict, and what events or decisions could trigger escalation?
- Who are the main stakeholders and conflict actors, including groups that may be excluded or adversely affected, and how should they be engaged?

- What formal, customary, village-level, or community mechanisms are available to prevent, manage, or resolve conflict, and are they considered accessible and impartial?
- Have previous government, donor-funded, village, or private-sector activities created or aggravated conflict?
- How have existing conflicts or community tensions affected previous government, donor-funded, village, or private-sector activities?
- How may existing conflicts, latent tensions, or instability affect the planning, implementation, operation, or sustainability of SEHATI activities?
- How may SEHATI activities aggravate existing tensions or inequalities, create new disputes, or negatively affect community relations, stability, and human security?
- What measures, engagement arrangements, monitoring, or conflict-resolution support would be needed to prevent or manage these risks?

ANNEX VIII: Cultural Heritage Identification

This Chance Finds Procedure (CFP) is designed specifically for the SEHATI Project. It aligns with the core requirements of World Bank ESS 8 (Cultural Heritage) but strips away the bureaucratic jargon so village governments and community workers can easily understand and follow it.

Cultural Heritage Screening Before Activity Approval

Before approving an activity involving excavation, land clearing, demolition, construction, rehabilitation, dredging, or movement of earth, the Village Government and facilitator shall check whether the proposed site contains or is located near known cultural heritage. This may include archaeological or historical sites, old buildings or structures, graves or burial areas, places of worship, sacred or customary sites, culturally significant landscapes or natural features, and sites identified as important by local communities or Masyarakat Adat.

The screening shall be undertaken through:

- site observation;
- consultation with land users, community representatives, customary or religious leaders, and other knowledgeable persons, where relevant; and
- confirmation of whether additional review or authorization from the competent cultural heritage authority is required.

If known or potentially significant cultural heritage may be affected, the activity shall not proceed until appropriate avoidance, design modification, consultation, authorization, or other measures have been identified. Activities likely to cause significant adverse impacts that cannot be avoided or appropriately managed shall not be financed.

ESS8 requires identification of cultural heritage, consultation, assessment and avoidance or mitigation of impacts. The Chance Finds Procedure is only one part of that framework

What is a "Chance Find"?

A chance find is any unexpected discovery of cultural, historical, or archaeological significance during village construction or digging activities. This includes:

- **Human remains** or unmarked graves.
- **Artifacts** (old pottery, tools, coins, jewelry, weapons).
- **Structures** (ancient walls, foundations, ruins, old shrines).
- **Fossils** or historically significant animal bones.

The SEHATI Village Chance Find Procedure

This step-by-step sequence must be followed immediately upon discovering a potential chance find. **Do not skip steps or alter the order.**

1. Stop Work Immediately: Prevent accidental damage.

As soon as an object or structure is uncovered, all digging, clearing, and construction work in the immediate area must stop. Do not try to dig the object out to see what it is.

2. Secure the Site: Protect the area from tampering.

Mark the area using physical barriers like caution tape, ropes, fencing, or branches. Secure an area large enough to prevent access, disturbance, damage, theft, or contamination of the discovery. The initial boundary may be adjusted following advice from the competent authority. Post a temporary guard if possible.

3. Report to Village Authorities:

The community worker or foreman must immediately notify the **Village Head (Kepala Desa)** and the **SEHATI Project Facilitator**.

4. Do Not Touch or Remove: Strictly enforced anti-looting rule.

Leave the item exactly where it is. Do not clean it, do not take photos to post on social media (to prevent looting), and absolutely do not allow anyone to take the item home.

If human remains or an unmarked grave are discovered, do not touch or move them. Secure the area and immediately notify the Village Government, Project facilitator, competent cultural heritage authority, and police or other competent authority, as applicable.

5. Escalate to Local Government:

The Village Government, supported by the facilitator, shall promptly notify the competent district or other relevant cultural heritage authority. The police or other competent authority shall also be notified where human remains, suspected criminal activity, theft, or site-security concerns are involved.

6. Wait for Official Assessment: Experts must evaluate the site.

A representative from the cultural authority will visit the village to evaluate the find. They will decide if the item can be quickly removed, if the design of the SEHATI project needs to shift slightly to protect a larger site, or if a full excavation is needed.

7. Resume Work Only with Permission:

Work in the secured area may resume only after written clearance is provided by the competent cultural heritage authority and the responsible Project entity, based on the agreed protection or management measures.

Roles and Responsibilities

To make this work at the village level, everyone needs to know exactly what they are responsible for:

Role	Key Responsibility during a Chance Find
Community Workers / Builders	Stop work, secure the physical area, and report the find immediately. Do not touch the items.
Village Head (Kepala Desa)	Ensure the site remains secure, notify district authorities, and communicate updates to the village to prevent rumors.
SEHATI Facilitator	Guide the Village Head through this procedure, document the find (internal photos/notes for project records), and notify SEHATI central management.
Local Cultural Authority	Assess the site, determine the historical value, and issue the final decision on how the project should proceed.

Before activities involving ground disturbance begin, the TPK, contractor, or site supervisor shall brief workers on the examples of chance finds, the stop-work requirement, reporting contacts, site-security rules, and prohibition on removing or publicly sharing discovered objects. The briefing may be included in the general pre-work safety briefing.

Chance Find Reporting and Monitoring Record

The Village Government, supported by the SEHATI Project Facilitator, shall complete the following record for each potential chance find. The record shall document the discovery, immediate protection measures, notifications, instructions received from the competent authorities, required protection or design measures, and written clearance before work resumes. The completed record shall be retained with the relevant village activity and Project monitoring files.

Chance Find Reporting and Monitoring Record

Information	Record
Village, activity, and location	
Date and time discovered	
General description of the find	
Person who reported the discovery	
Work stopped and area secured	☐ Yes ☐ No
Village Government and facilitator notified	Date/time:
Competent authority notified	Authority/name: \nDate/time:
Police or other authority notified, where applicable	Authority/name: \nDate/time:
Instructions received	
Protection, design modification, or other measures required	
Required measures completed	☐ Yes ☐ No \nSupporting evidence/reference:
Written clearance to resume work	Authority: \nDate: \nReference:
Work resumed	Date/time:

Information	Record
Record completed by	Name/position/date:

Confidentiality and Site Protection: Do not include sensitive location information in publicly accessible records where disclosure could lead to theft, looting, damage, disturbance, or unauthorized access. Detailed location information, photographs, and authority instructions shall be retained only in the appropriate restricted Project file.

The "Golden Rules" (For Village Notice Boards)

If you print a simple poster for the work site, use these rules:

- **DO** stop digging immediately.
- **DO** block off the area so no one steps on it.
- **DO** tell the Village Head right away.
- **DON'T** pull the object out of the ground.
- **DON'T** wash or clean the object.
- **DON'T** take the object home or sell it.

ANNEX IX: Community Health and Safety Guidelines

Purpose and Scope

These guidelines provide simple minimum measures to protect community members, including children, older persons, persons with disabilities, and other potentially vulnerable people, from health and safety risks associated with SEHATI-supported construction, equipment, productive facilities, services, and operating activities.

The guidelines apply together with the E&S screening results and the relevant Annex III ESCOP. Annex IV applies to worker OHS, while Annex IX focuses on risks to community members and users. Annex X and the SEF apply to SEA/SH prevention, sensitive complaints, stakeholder engagement, and the Project grievance mechanism.

Party	Minimum responsibility
Village Government	Ensure community-safety measures are identified, communicated, implemented, and monitored
TPK/site supervisor	Check the site, maintain barriers and signs, inform residents, record concerns, and follow up corrections
Contractor/service provider/operator	Implement required safety measures for works, equipment, facility, or service
Facilitator	Support communication, simple monitoring, documentation, and referral
Community members/users	Follow safety notices and report unsafe conditions
District team	Verify significant risks, corrective actions, and issues requiring technical review

1. Securing the Construction Site

Protecting villagers, especially children and the elderly, from accidental entry into active construction areas is the primary defense against injury.

- **Establish Clear Boundaries:** Use temporary fencing, bright safety ropes, or physical barricades to separate the construction area from public spaces, pathways, and housing.
- **Install Visible Warning Signs:** Place clear, simple warning signs at all entry points and dangerous areas. Use universal symbols, pictures, and the local language (e.g., "DANGER: CONSTRUCTION SITE," "DO NOT ENTER," "DEEP EXCAVATION").
- **Control Access:** Restrict unauthorized personnel from entering the site. Ensure that children are strictly prohibited from playing near construction materials, open trenches, or heavy machinery.
- **Secure Materials and Excavations:** Open holes, trenches, wells, stockpiles, and other dangerous areas shall be covered where feasible or protected with stable barriers and

warning signs whenever the site is unattended. Store hazardous materials (like fuel, cement, or paint) in a locked, covered area away from children and water sources.

2. Managing Traffic and Equipment Safety

The movement of construction materials and heavy vehicles poses a significant risk to pedestrians and local village traffic.

- **Enforce Village Speed Limits:** Construction and delivery vehicles shall follow applicable speed limits and travel slowly through settlements and near schools, health facilities, markets, places of worship, and other busy community areas
- **Schedule Deliveries Safely:** Plan the delivery of heavy materials during off-peak hours. Avoid times when children are walking to or from school, or during major community gatherings.
- **Provide Traffic Flagmen:** For large deliveries or when heavy machinery is moving in tight village roads, assign a designated worker or community member with a safety vest and flag to guide the vehicle and warn pedestrians.
- **Secure Parked Equipment:** Ensure all machinery is turned off, keys are removed, and equipment is safely parked away from public roads when not in use.

Affected residents and road users shall be informed in advance of planned deliveries, temporary road restrictions, diversions, or other significant traffic disruptions, in accordance with Section 3 below.

3. Informing the Community Before Work Begins

Before work or another Project-supported activity that may affect public access, traffic, water, electricity, noise levels, waste collection, or community facilities begins, the Village Government or TPK shall inform affected residents of:

- what activity will take place;
- where and when it will occur;
- how long the disruption is expected to last, where this is known;
- any temporary access route or service arrangement;
- the main safety precautions;
- the responsible contact person; and
- how to report a safety concern or grievance.

Information shall be provided in a form that affected community members can understand, using village notice boards, community meetings, signs, announcements, messaging groups, or other locally appropriate channels. Particular attention shall be given to people who may require additional assistance or advance notice, including older persons, persons with disabilities, schools, health facilities, businesses, and households located closest to the activity.

Where the activity affects an essential access route or service, the Village Government or TPK shall establish and communicate a safe temporary arrangement before the disruption begins.

4. Protecting Public Health and the Environment

Construction activities can introduce new health risks to the community through pollution, waste, and changes to the local environment.

- **Control Dust and Air Pollution:** Spray water on dusty roads, exposed soil, and sand piles, especially during the dry season, to prevent respiratory issues in the community. Cover truck loads with tarps when transporting loose materials.
- **Limit Noise Disruptions:** Limit noisy activities to agreed daytime hours. Inform nearby residents in advance and avoid school hours, religious observances, community events, and locally recognized rest periods where relevant.
- **Prevent Stagnant Water:** Ensure that construction activities do not block natural drainage. Fill in or drain puddles, empty containers, and open trenches to prevent mosquitoes from breeding and spreading diseases like Dengue or Malaria.
- **Manage Construction Waste:** Do not burn plastic, chemical containers, or toxic waste in the village. Collect and dispose of construction debris in designated, safe disposal sites away from rivers, farming areas, and homes.
- **Safe buffer distance:** Siting of livestock, manure, waste, composting, wastewater, processing, fuel, chemical, and other potentially polluting facilities shall consider nearby houses, schools, health facilities, places of worship, wells, water bodies, drainage, prevailing wind direction, flood risk, access routes, facility size, and applicable technical or permitting requirements. Where screening identifies a material health, odor, pollution, fire, or safety concern, the site or design shall be reviewed by the relevant district technical authority before approval.

5. Safety of Small Infrastructure and Facilities

For small-scale infrastructure and facility construction or rehabilitation, the Village Government, TPK, contractor, or site supervisor, as applicable, shall ensure that:

- dangerous areas, equipment, materials, electrical installations, open trenches, ponds, or other hazards are secured from community access;
- warning signs or simple barriers are provided where needed;
- completed works do not leave obvious safety hazards such as open holes, unstable structures, exposed electrical wiring, sharp materials, or unsafe access;
- basic safety features included in the design, such as covers, railings, guards, steps, or lighting, are properly installed; and
- any unsafe condition identified before handover is corrected before the infrastructure or facility is opened for community use.

Before handover or opening for community use, the TPK or Village Government shall check that the site is safe, construction waste and temporary hazards have been removed, and required safety features are in place.

6. Managing Worker Conduct and Emergencies

Interactions between outside construction workers and the local community must be managed to maintain social harmony and safety, alongside preparing for any accidents.

- **Enforce a Code of Conduct:** Require all workers (especially those from outside the village) to sign and follow a Code of Conduct. This must include strictly prohibiting any form of harassment, gender-based violence (GBV), or sexual exploitation and abuse (SEA) against community members.
- **Respect Local Culture:** Ensure workers are briefed on local village customs, dress codes, and restricted sacred areas before work begins.
- **Maintain First Aid and Emergency Contacts:** Keep a fully stocked First Aid kit on the construction site at all times. Display emergency contact numbers (local clinic, village head, police) visibly near the site.

  Community Emergency Procedure
  If Project-supported construction or rehabilitation creates an immediate danger to the community:
  1. Stop the activity, where safe to do so.
  2. Keep community members away from the dangerous area using barriers, warning signs, or other appropriate controls.
  3. Provide or obtain appropriate emergency assistance, including first aid or medical support where needed.
  4. Contact the Village Government and the relevant emergency service, such as the nearest health facility, fire service, police, or other competent authority, as applicable.
  5. Report and record the incident through the Project incident-reporting procedure. Sensitive cases shall be referred through the applicable confidential pathway.
  6. Correct the unsafe condition before work resumes or the completed infrastructure or facility is opened for community use.

  Community health and safety incidents, near misses, and serious complaints shall be recorded and followed up. Serious incidents shall be reported immediately through the Project incident-reporting procedure. Sensitive complaints, including SEA/SH, shall be referred through the designated confidential pathway and shall not be described in the general incident log.

  The Village Government or TPK shall record the issue, immediate action taken, responsible person, required corrective action, and completion date.

- **Utilize the Village Grievance Redress Mechanism (GRM):** Inform the community about how to report safety concerns, health issues, or worker misconduct. Ensure the village GRM post is easily accessible, allows for anonymous complaints, and handles issues promptly.

7. Village Community Safety Check

The Village Government or TPK shall use this checklist during construction or rehabilitation and before the completed infrastructure or facility is opened for community use. The checklist may be integrated into the village progress and monitoring report.

Village Community Safety Check

Minimum check	Yes	No / N.A.	Issue / required action
Dangerous areas are secured and warning signs are visible	☐	☐	
Safe public access or temporary routes are maintained	☐	☐	
Vehicle and equipment movements are controlled	☐	☐	
Dust, noise, waste, wastewater, odor, and stagnant water are controlled	☐	☐	
Hazardous materials, machinery, and construction areas are inaccessible to unauthorized persons	☐	☐	
Emergency contacts and community grievance channels are displayed	☐	☐	
Affected residents were informed of disruptions and safety measures	☐	☐	
Previous safety concerns and corrective actions were addressed	☐	☐	
Completed works have no obvious safety hazards before handover or opening	☐	☐	

If “No”: record the required action, responsible person, and completion date. Where there is an immediate or serious danger, stop or restrict the activity, keep community members away from the affected area, and refer the issue to the district or relevant Project technical/E&S personnel.

Checked by: _____
Position: _____
Date: _____
Next action or follow-up date, where required: _____

ANNEX X: GBV, SEA/SH Prevention and Response Action Plan

STRENGTHENING COMMUNITY RESILIENCE AND SUSTAINABLE ECONOMIC DEVELOPMENT IN RURAL INDONESIA (SEHATI)
GENDER-BASED VIOLENCE PREVENTION AND RESPONSE ACTION PLAN

1. Purpose and Scope

This Action Plan sets out how SEHATI will identify, prevent, mitigate, respond to, monitor, and report **gender-based violence (GBV)** risks associated with project activities, with primary operational attention to **sexual exploitation and abuse and sexual harassment (SEA/SH)**. It applies across all project components, locations, institutions, and project-related personnel, including direct and contracted workers, community workers, consultants, facilitators, trainers, service providers, village implementation teams, BUM Desa personnel, and other persons acting on behalf of the project. The Plan covers project-related interactions at workplaces, during travel and training, in accommodation and project-supported facilities, and through digital communication, while also recognizing broader GBV risks that may limit the participation and benefits of women, girls, and other at-risk groups.

1.1. Objectives

Assess and periodically update project-specific SEA/SH risks using applicable World Bank tools and local evidence.

Integrate proportionate GBV/SEA/SH prevention and mitigation measures throughout project design, procurement, contracts, implementation, supervision, and operation.

Prevent abuse of power, sexual exploitation, harassment, and retaliation involving project workers, gatekeepers, and beneficiaries.

Ensure safe, confidential, accessible, and survivor-centered reporting and referral through worker and community grievance mechanisms.

Clarify institutional responsibilities, monitoring, reporting, budgeting, and linkages with existing specialized GBV services.

2. Project

2.1. Proposed Development Objective

SEHATI is expected to support approximately The 6,085-entry longlist will be screened to target approx. 5,000 villages and around 15.5 million direct beneficiaries. Women, youth, Indigenous Peoples, persons with disabilities, and other disadvantaged or vulnerable groups are part of the intended beneficiary population.

2.2. Components

	Component	Activities Relevant to GBV Risk
1	**Climate-Resilient Productive Infrastructure Investment for Food Security, Sustainable Tourism, and Climate Change Adaptation**	Participatory, gender-sensitive village investment planning; institutional monitoring; and grants for small-scale roads, bridges, irrigation, water storage, markets, processing and storage facilities, sanitation, clean water, waste management, homestays, and disaster-risk-reduction infrastructure.
2	**Strengthening Community Institutions and Resilience for Food Security and Local Village Economies**	Productive equipment for BUM Desa and women and youth groups; training, incubation, coaching and market linkage; and digital connectivity, services, and skills.
3	**Project Management Support**	National and subnational management, E&S risk management, technical assistance, monitoring, learning, communications, audit, and grievance management.

2.3. Relevant Project Features

Large geographic coverage and decentralized implementation across locations with different social norms, service availability, and institutional capacity.

Frequent contact between beneficiaries and people who influence project selection, jobs, grants, equipment, training, approvals, payments, market access, or complaint outcomes.

Small civil works and community labor that may involve local workers, external technical personnel, contractors, supervisors, and temporary work sites.

A deliberate increase in women's voice, leadership, access to assets, skills, income, and digital services, which may challenge household or community power relations and generate backlash.

Training, mentoring, business matching, travel, accommodation, homestay, tourism, and online interactions that may occur away from routine community oversight.

Digital interoperability and grievance tracking that create serious confidentiality risks if sensitive case information is stored or shared through general systems.

3. Standards, Definitions, and Guiding Principles

3.1. Applicable Standards and National Framework

Standard/ Instrument	Relevance to SEHATI
World Bank ESS1	Requires assessment and management of social risks and differentiated impacts, including risks to disadvantaged or vulnerable groups.

Standard/ Instrument	Relevance to SEHATI
World Bank ESS2	Requires fair treatment and safe working conditions, worker grievance mechanisms, and measures addressing workplace harassment and SEA/SH risks.
World Bank ESS4	Requires management of community health and safety risks, including those associated with workers and project-supported infrastructure and services.
World Bank ESS10	Requires meaningful and inclusive engagement and an accessible, inclusive, and responsive project grievance mechanism.
World Bank SEA/SH guidance	The 2025 Good Practice Note for IPF involving major civil works and the 2022 Good Practice Note for Human Development Operations inform risk assessment, prevention, grievance handling, referral, and accountability.
Law No. 12/2022	Provides Indonesia's framework for prevention of sexual violence and for handling, protection, and recovery of victims.
Government Regulation No. 27/2024	Governs coordination and monitoring of prevention and handling of victims of sexual violence.
Presidential Regulations No. 55/2024 and No. 98/2024	Govern regional UPTD PPA services and integrated services at central level.
Government Regulation No. 30/2025	Governs prevention and integrated handling, protection, and recovery, including accessibility for children, persons with disabilities, and older persons.
Minister of Manpower Decree No. 88/2023	Provides guidance on prevention and handling of sexual violence in the workplace.
Other relevant Indonesian law	Includes domestic violence, child protection, disability, labor, personal data protection, witness and victim protection, and criminal procedure requirements.

3.2. Definitions

Term	Working Definition
Gender-based violence	Any harmful act perpetrated against a person's will that is based on socially ascribed gender differences. GBV may be physical, sexual, psychological, social, or economic and may occur in public, private, workplace, or digital settings.
Sexual exploitation	Any actual or attempted abuse of a position of vulnerability, differential power, or trust for sexual purposes, including gaining monetary, social, or political benefit from another person's sexual exploitation.
Sexual abuse	Actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions.
Sexual harassment	Unwelcome sexual advances, requests for sexual favors, and other unwanted verbal, non-verbal, digital, or physical conduct of a sexual nature.
Child	A person under 18 years of age for the purposes of this Plan and the project Code of Conduct.
Project-related allegation	An allegation in which the alleged perpetrator is associated with SEHATI, the conduct occurred in connection with a project activity or location, or project resources, authority, access, or relationships plausibly enabled the conduct.
Survivor-centered approach	An approach that prioritizes the survivor's safety, dignity, rights, needs, wishes, informed consent, privacy, non-discrimination, and control over decisions, subject to clearly explained legal limits.

3.3. Guiding Principles

Do no harm. Project actions shall not increase exposure to violence, stigma, retaliation, family conflict, economic loss, or repeated disclosure.

Safety first. Immediate safety and urgent health needs take priority over administrative steps.

Informed consent and choice. The survivor chooses whether to use a referral or pursue a project complaint, except where applicable law creates mandatory obligations that have been explained in advance.

Confidentiality and data minimization. Only the minimum information required for referral, project linkage, and reporting shall be collected, accessed, retained, and shared.

Non-discrimination and accessibility. Channels and services shall consider sex, age, disability, language, literacy, ethnicity, Indigenous status, remoteness, poverty, and digital access.

Child safeguarding. All decisions involving a child prioritize the best interests of the child and use trained child-protection personnel and age-appropriate procedures.

Prevention before response. Design, procurement, supervision, and transparent decision-making shall reduce opportunities for abuse before incidents occur.

Accountability without revictimization. The project shall enforce contractual and employment obligations while avoiding unnecessary interviews, confrontation, or mediation between the survivor and alleged perpetrator.

4. SEA/SH Risk Assessment

4.1. Current Risk Position & Contextual Evidence

A preliminary rapid assessment indicates that the Project has a **Substantial SEA/SH risk**, subject to confirmation through the applicable World Bank SEA/SH Risk Screening Tool. The preliminary risk rating relates to:

Contextual GBV Risks in Indonesia: documented prevalence of violence against women, including the 2024 National Women's Life Experience Survey finding that 6.6 percent of women aged 15–64 experienced physical and/or sexual violence by a partner and/or non-partner in the preceding 12 months; significant variation in social norms, reporting behavior, accessibility, and availability of specialized GBV services across project locations; and potentially limited access to survivor-centered health, psychosocial, legal, and protection services in some areas.

Project-Specific SEA/SH Risks: broad and geographically dispersed implementation; decentralized delivery and reliance on village-level institutions and community workers; civil works and associated worker-community interactions; provision of productive assets, grants, information, training, and economic opportunities that may create or reinforce power asymmetries; engagement of contractors, facilitators, trainers, service providers, and local gatekeepers; tourism-related activities that may increase interaction with external actors; and project-related travel, accommodation, and digital communication that may create additional opportunities for sexual harassment, exploitation, abuse, or retaliation.

The risk assessment shall be formally validated and periodically updated as project locations, labor profiles, procurement arrangements, implementation modalities, and local GBV service availability become more clearly defined.

4.2. Factors to Assess

Assessment Domain	Questions and Evidence
Context	Prevalence and normalization of violence; reporting barriers; conflict or election tensions; poverty and remoteness; child marriage; disability and Indigenous inclusion; safety of public spaces and transport; mobile and internet access.

Assessment Domain	Questions and Evidence
Project footprint	Civil works, labor source and size, worker accommodation, remote travel, working hours, site access, tourism or homestay activities, digital platforms, and interaction with children.
Power and benefits	Control over village selection, jobs, wages, grants, equipment, land, training, certification, procurement, market access, data, and complaints.
Institutional capacity	Availability and competence of E&S and GBV personnel, contractor supervision, district focal points, UPTD PPA and other services, safe channels, referral agreements, data security, and sanctions.
Participation and backlash	Women's actual influence in Musyawarah Desa, leadership and asset control; retaliation, domestic violence, or social sanctions connected with increased voice, income, mobility, or digital access.

5. Project-Specific Risk Analysis

Risk identification distinguishes project-related SEA/SH, workplace sexual harassment, broader GBV affecting participation and benefit, child-safeguarding risks, and harm that could be caused by an unsafe response. **Complaint numbers are not a measure of prevalence** because under-reporting is expected.

5.1. Risk Matrix by Activity

Activity	Risk Pathway	Groups at Heightened Risk	Priority Controls
Village planning and Musyawarah Desa	Women are present but unable to influence decisions; intimidation, sexualized comments, exclusion, retaliation, or backlash for leadership; unsafe meeting times and locations; gatekeepers request sexual favors for proposal support.	Women, adolescent girls, female-headed households, persons with disabilities, Indigenous women, local facilitators.	Separate and mixed consultations; accessible venues and times; female facilitators or focal points; transparent selection criteria and records; meaningful-participation indicators; anti-retaliation messaging; confidential channels; backlash risk review.

Activity	Risk Pathway	Groups at Heightened Risk	Priority Controls
Civil works and community labor	SEA/SH by workers, supervisors, consultants, or community members; workplace harassment; quid pro quo recruitment or wages; unsafe sanitation, routes, working hours, transport, or accommodation; retaliation after reporting.	Community members near sites; female and young workers; community workers; informal workers; children near sites.	Workforce profile and site risk screening; local recruitment where appropriate; worker and manager Codes of Conduct; induction before deployment; safe facilities and transport; worker GMs; contractor focal point; supervision and sanctions; community information.
Infrastructure siting and design	Poor lighting, visibility, privacy, accessibility, or location increases harassment or assault risk during construction or use. Water points, markets, sanitation, roads, storage facilities, and tourism assets may create unsafe routes or isolated spaces.	Women and girls, persons with disabilities, older persons, workers using facilities at night.	Participatory safety audit; design modifications; sex-separated and lockable sanitation where appropriate; lighting, sightlines, accessible paths, emergency information, safe operating hours, and O&M responsibility.
Land and asset decisions	Women or other users are excluded from land consultation; coercive donation or access agreements; project benefits are used to pressure consent; disputes trigger threats or violence.	Women with use rights but no formal title, spouses, tenants, Indigenous land users, poor households.	Separate verification of rights and consent; participation of spouses and users; no project financing where consent is coerced or land is disputed; accessible land grievance channels linked to the RF and IPPF.
Equipment grants and productive assets	Gatekeepers exploit control over eligibility, allocation, rental, or access; sexual favors are demanded; women lose control of benefits or face intimate partner violence or economic abuse after receiving assets or income.	Women entrepreneurs, group members, female workers, youth, people excluded from BUM Desa networks.	Published eligibility and asset-use rules; more than one approver; auditable decisions; direct information to applicants; safe complaints; household and male engagement designed with local specialists; ownership and benefit-control monitoring.

Activity	Risk Pathway	Groups at Heightened Risk	Priority Controls
Training coaching and market linkage	Sexual harassment or exploitation by trainers, mentors, buyers, participants, or project personnel; unsafe travel, accommodation, one-to-one mentoring, evening events, or online communication; retaliation affecting certification or market access.	Women and young participants, trainees with disabilities, participants traveling away from home.	Provider Code of Conduct; safe-event protocol; vetted venues and accommodation; transparent mentoring rules; multiple contact options; consent for travel and media; trained focal points; complaint channels displayed at each event.
Digital connectivity and services	Technology-facilitated harassment, stalking, grooming, image-based abuse, doxxing, fraudulent recruitment, or sexual exploitation; unsafe collection or disclosure of personal data; children exposed through new connectivity.	Women, girls, young users, persons with limited digital literacy, people using shared devices.	Digital-safety curriculum; privacy-by-design; consent for photos and data; reporting and blocking guidance; child safeguards; provider obligations; no public beneficiary lists containing sensitive data; secure communications.
Ecotourism homestays and visitor facilities	Increased contact with visitors and intermediaries creates harassment, exploitation, trafficking, or child sexual exploitation risks; workers or hosts lack reporting options.	Women and youth workers, homestay households, children, guides, vendors.	Tourism safeguarding assessment; business and visitor Codes of Conduct; child-safe tourism rules; guest complaint information; safe staffing and transport; links with UPTD PPA, tourism authorities, and service providers.
Project management field travel and workplaces	Workplace sexual harassment; abuse of supervisory authority; unsafe field travel or accommodation; consultant misconduct; retaliation; fragmented accountability among	Civil servants, consultants, facilitators, drivers, junior and temporary staff.	Institutional Code of Conduct; workplace prevention procedure; travel protocol; confidential worker GMs; management accountability; independent escalation outside line

Activity	Risk Pathway	Groups at Heightened Risk	Priority Controls
	CPMU, CPIU, PIU, NPMU, and districts.		management; routine climate survey.
GRM incident handling and project data	Repeated questioning, victim blaming, forced reporting or mediation, retaliation, disclosure of identity, insecure case records, or inclusion of sensitive data in interoperable dashboards causes further harm.	Survivors, complainants, witnesses, accused persons, focal points.	Trained intake; minimal data; informed consent; no mediation; separate restricted case register; role-based access; non-identifying Bank reports; data-retention rules; quality-assured referral; Accountability and Response Framework.
Pre-existing GBV affecting participation	Domestic violence, controlling behavior, stigma, mobility restrictions, unpaid care, or community sanctions prevent attendance, leadership, asset use, or income control even when the project did not cause the violence.	Women and girls, persons with disabilities, socially excluded groups.	Safe scheduling and participation options; childcare where feasible; separate consultations; referral information; do-no-harm economic inclusion; monitoring of benefit control and backlash; no expectation that project staff manage cases.

6. Prevention and Risk Mitigation Measures

6.1. Staffing and Readiness

Recruit a qualified full-time Gender and GBV Specialist within the CPMU before field activities and retain the function for the project duration.

Designate and train E&S and GBV focal points at CPIU and PIU and district levels, with at least one safe escalation option outside the normal supervisory line and appropriate female representation.

Complete a workload-based staffing plan for The 6,085-entry longlist will be screened to target approx. 5,000 villages. A single national specialist cannot serve as the sole complaint receiver, trainer, verifier, and monitor across all locations.

Apply a district readiness gate: no village rollout until focal points, referral contacts, complaint channels, secure data arrangements, training, and budget are operational for that rollout area.

6.2. Safe and Inclusive Planning

Conduct consultations with women and other at-risk groups in formats that permit safe participation and do not ask participants to disclose personal experiences of violence.

Use women facilitators or trusted female focal points where preferred; provide accessible venues, appropriate timing, local languages, disability accommodations, and childcare or transport support where feasible.

Define meaningful participation as influence over priorities and decisions, not attendance alone. Record whether women's safety and livelihood priorities are reflected in proposals and whether women hold decision-making roles.

Discuss possible household or community backlash before expanding women's control of assets, income, travel, leadership, or digital access. Design locally appropriate engagement with men and leaders without shifting responsibility away from perpetrators.

6.3. Safety Audit and Design Integration

A proportionate gender and accessibility safety audit shall be part of E&S screening and proposal appraisal for all physical facilities, public spaces, work sites, training venues, travel arrangements, digital services, and tourism activities. Required measures shall be included in technical designs, bills of quantity, procurement documents, contracts, supervision checklists, commissioning, and O&M plans. Appendix C provides the minimum questions.

6.4. Procurement, Contracts, and Codes of Conduct

Include priced E&S and SEA/SH requirements in bidding documents, evaluation, contracts, grant agreements, training-provider agreements, and digital-service agreements.

Require an institutional or company Code of Conduct, manager responsibilities, and an individual Code of Conduct in languages understood by workers. Appendix D states the minimum content.

Require 100 percent of project workers to sign the Code of Conduct and complete induction before beginning work. Maintain a roster and signed records subject to privacy controls.

Require each employer or provider to appoint a trained focal point, operate a worker GMs, communicate community channels, enforce proportionate disciplinary measures, prevent retaliation, and report non-identifying implementation data.

Treat failure to implement agreed SEA/SH obligations as contractual non-performance subject to corrective action, withholding of payment where contractually permitted, removal of personnel, termination, or other remedies.

6.5. Training and Supervision

Training shall be role-specific, competency-based, and repeated after staff turnover or material changes. Completion alone is insufficient; supervisors shall check understanding and actual

compliance. Minimum modules cover prohibited conduct, power and consent, child safeguarding, safe receipt of disclosures, confidentiality, referral, retaliation, worker and community GMs, manager duties, and sanctions. Personnel who receive SEA/SH complaints require additional practical training and supervision.

6.6. Community Information

Before works or services begin, communities shall receive clear information in accessible local formats on expected worker behavior, prohibited sexual exploitation and harassment, the right to access project benefits without sexual demands, available reporting channels, confidentiality limits, referrals, non-retaliation, and what the project can and cannot do. Information shall be repeated at key milestones and provided in separate sessions where this improves safety and participation.

6.7. Service Mapping and Referral Agreements

The CPMU shall establish a national referral framework and district-level service directories through collaboration with KemenPPPA, Dinas PPPA and UPTD PPA, health facilities, psychosocial and legal services, police and justice actors, disability organizations, child-protection services, and qualified civil society providers. Mapping shall verify actual capacity, confidentiality, accessibility, hours, geographic reach, fees, languages, and referral procedures rather than list institutions by name only. Appendix B provides a template.

6.8. Digital and Data Safeguarding

Do not store survivor names, contact details, narratives, or alleged perpetrator identities in the general GRM, interoperable MIS, shared spreadsheets, dashboards, or routine email chains.

Maintain a separate restricted case register managed only by authorized and trained personnel, with role-based access, encryption, audit logs, secure backups, retention limits, and a documented deletion protocol.

Report only aggregate and non-identifying data. Suppress small-cell data where location, age, sex, or other characteristics could permit re-identification.

Apply privacy and safeguarding rules to beneficiary lists, photos, training platforms, chat groups, online mentoring, e-commerce onboarding, and digital connectivity services.

7. Risk Response

7.1. Design of the SEA/SH-Sensitive Pathway

SEHATI shall use a specialized pathway linked to both the community GMs under ESS10 and the worker GMs under ESS2. The pathway may adapt the overall project GMs, connect it to qualified UPTD PPA or third-party providers, or use a hybrid model. The selected arrangement shall be based on risk, local capacity, survivor trust, confidentiality, accessibility, and independence from the alleged perpetrator's chain of command.

Principle	Operational Requirement
Safety	Assess immediate risks and do not take action that exposes the survivor or complainant to retaliation, violence, stigma, or loss of livelihood.
Choice and consent	Explain options and limitations. Obtain informed consent for each referral and information-sharing step, subject to child-protection and other mandatory legal duties.
Confidentiality	Share information strictly on a need-to-know basis and only in the minimum form required.
Respect	Listen without judgment, disbelief, blame, pressure, or requests for unnecessary detail.
Non-discrimination	Provide equal access regardless of sex, age, disability, ethnicity, religion, Indigenous status, sexual orientation, gender identity, economic status, or other status, consistent with applicable law and the World Bank ESF.
Support	Offer a warm referral to appropriate health, psychosocial, protection, legal, police, shelter, disability, or child services according to the survivor's wishes and needs.

7.2. Reporting Channels

The final disclosed Plan shall identify current telephone, messaging, web, email, postal, in-person, worker, and trusted community channels. At least one channel shall permit direct confidential contact with a trained female focal point; anonymous reports shall be accepted; disability-accessible and low-connectivity options shall be available; and no complaint shall require payment. Channel selection shall be validated through safe consultation with women, workers, persons with disabilities, Indigenous communities, and service providers.

7.3. Minimum Intake and Response Process

Step	Required action
1. Receive	Listen without judgment. Do not seek proof or detailed chronology. Explain confidentiality, its legal limits, available support, and the project process. If there is immediate danger or urgent health need, support safe emergency referral.

Step	Required action
2. Record minimum data	Record only: the nature of the allegation in the complainant's own words; whether the alleged perpetrator may be project-associated; age and sex if voluntarily provided or already known; whether referral was offered and accepted; and the date and channel. Use a coded case identifier.
3. Obtain consent and refer	Offer a warm referral to the survivor's preferred qualified service. Service access is not conditional on a formal complaint or project linkage. Record consent without recording unnecessary case details.
4. Escalate securely	Transmit the coded allegation to the designated Gender and GBV Specialist or authorized focal point within 24 hours. Do not transmit identifying data through routine GMs systems or broad distribution lists.
5. Check project linkage	The authorized focal point determines only whether the allegation is plausibly linked to the project, based on limited available information. The GMs do not determine criminal responsibility or interview all parties.
6. Notify management and the World Bank	For project-related allegations, notify the authorized CPMU official and the World Bank within the timeframe and minimum-information protocol agreed in the ESCP and applicable incident-reporting procedure. No identifying information is shared.
7. Accountability response	The relevant employer and competent authorities implement safety measures, fair review, investigation where appropriate, and disciplinary or contractual action under the approved Accountability and Response Framework, law, contract, and Code of Conduct. Avoid repeated interviews and conflicts of interest.
8 Inform and close	Keep the survivor informed according to their preferences. Close the GMs record when referral has been offered and project actions have been completed or documented. Closure does not depend on a criminal conviction or continued use of services.

7.4. Prohibited Response Practices

No mediation, reconciliation meeting, or face-to-face confrontation between the survivor and alleged perpetrator.

No requirement to report to police or pursue a formal complaint as a condition for receiving referral information or support, except where clearly applicable legal duties require specified action.

No questioning by untrained staff, repeated retelling, victim blaming, promises of outcomes, or collection of evidence by GMs personnel.

No sharing of names, narratives, medical information, or alleged perpetrator details in routine reports, public meetings, village forums, dashboards, or general grievance logs.

No retaliation, termination of benefits, removal from training, adverse employment action, or social pressure because a person reports or supports a complaint in good faith.

7.5. Children and Other High-Risk Disclosures

Any allegation involving a person under 18 shall be handled through trained child-protection personnel, with the child's best interests, evolving capacities, safety, and age-appropriate communication at the center. The project shall identify mandatory reporting and guardian involvement requirements under Indonesian law before rollout and shall explain relevant confidentiality limits to children and caregivers. Guardian involvement shall be assessed for safety where the guardian may be implicated or may increase risk. Disability-related communication and decision-support needs shall also be built into the protocol.

7.6. Non-Project-Related GBV Disclosures

When a person discloses GBV that is not linked to SEHATI, trained personnel shall offer information and a consensual referral to qualified services. The project shall not investigate the incident, create an unnecessary case narrative, or imply that SEHATI replaces statutory or specialist services. Non-project disclosures may be counted only in highly aggregated, non-identifying referral statistics where safe and justified.

8. Institutional Arrangements and Responsibilities

Before field implementation, the CPMU shall approve an Accountability and Response Framework that defines the roles of the GM, Gender and GBV Specialist, employers, service providers, government authorities, and World Bank; standards for immediate safety measures; project-linkage checks; conflicts of interest; fair employment review; investigation by competent actors; sanctions; contractor remedies; appeal or review; documentation; survivor communication; and case closure. The framework shall prevent the project GM from becoming an unqualified investigative body.

Actor	Core Responsibilities
Steering Committee	Provide strategic oversight, ensure inter-ministerial coordination, review systemic risks and corrective actions, and protect adequate resourcing.
CPMU and Project Director	Remain accountable for implementation of this Plan; approve the risk rating, staffing, Accountability and Response Framework, budget, reporting, and corrective actions; notify the World Bank as required.

Actor	Core Responsibilities
CPMU Gender and GBV Specialist	Lead assessment and updates; technical guidance; service mapping; referral architecture; training; complaint-pathway quality assurance; non-identifying reporting; contractor support; and coordination with KemenPPPA and partners. The Specialist is not the sole intake point for all locations.
CPMU E&S Lead	Integrate measures into the ESMF, ESCP, SEF, LMP, POM, procurement, screening, ESMPs, supervision, incident management, and completion verification.
CPIU and PIU focal points	Apply component-specific controls, verify procurement and provider compliance, support district teams, escalate incidents securely, and report implementation indicators.
District Coordination Team	Include the office responsible for women's empowerment and child protection; validate service pathways; designate trained focal points; supervise local implementation; support safety audits; and coordinate corrective action.
Dinas PPPA and UPTD PPA	Provide or coordinate statutory and integrated services within mandate, advise on local referral pathways, and support training and case referral under agreed protocols. Inclusion in the project pathway does not transfer statutory functions to the project.
Village government and facilitators	Support safe participation, communicate conduct standards and channels, assist safety audits, ensure local Codes of Conduct, and make referrals through trained focal points. They shall not investigate SEA/SH or disclose cases in Musyawarah Desa.
Contractors employers and providers	Prepare and implement required SEA/SH measures; appoint focal points; sign and enforce Codes of Conduct; train workers; operate worker GMs; take employment and contractual action; prevent retaliation; and report non-identifying data.
Qualified GBV service providers	Provide survivor-centered health, psychosocial, protection, legal, shelter, disability, or child services; support warm referral and capacity building; protect case confidentiality; and maintain professional independence.
MEL and MIS teams	Track readiness and implementation indicators only; implement data-minimization and small-number suppression; never access or store case narratives or identities without a specific authorized function.

9. Action Plan Matrix

ID	Action	Timing	Responsible	Indicator or Completion Evidence	Budget Source
A1	Reconcile the PAD, Readiness Criteria, ESMF, results framework, component structure, budget, institutional nomenclature, and village rollout baseline.	Before ESMF finalization	CPMU with CPIUs and PIUs	One approved design baseline and change log	Component 3 project management
A2	Complete and document the applicable World Bank SEA/SH risk screening tool, with participation from qualified GBV expertise and relevant local stakeholders.	Before appraisal or as agreed in ESCP; update annually and after material change	CPMU Gender and GBV Specialist with E&S Lead	Risk rating approved; evidence and update date recorded	Component 3 E&S budget
A3	Recruit the full-time CPMU Gender and GBV Specialist and complete a workload-based national, regional, and district staffing plan.	Before field activities	CPMU	Specialist mobilized; staffing plan approved; vacancies tracked	Component 3 personnel
A4	Finalize this Plan and integrate binding commitments into the ESMF, ESCP, SEF, LMP, POM, PTO, RF, IPPF, procurement documents, grant agreements, ESMP	Before relevant documents are cleared or issued	CPMU E&S Lead and Gender and GBV Specialist	Cross-document QA checklist completed	Component 3 technical assistance

ID	Action	Timing	Responsible	Indicator or Completion Evidence	Budget Source
	tools, and MIS specifications.				
A5	Approve the SEA/SH Accountability and Response Framework, including employer duties, investigation boundaries, sanctions, conflicts of interest, referral, and closure.	Before field activities and contracting	CPMU Project Director	Approved framework; responsible actors trained	Component 3
A6	Prepare a fully costed multi-year budget and annual work plan covering staffing, mapping, training, communication, channels, referral access, monitoring, and contingency.	Before effectiveness and annually	CPMU Finance and E&S teams	Budget approved and execution reported	Component 3 and subproject costs
A7	Establish a national referral framework and verify district service maps, including UPTD PPA, health, psychosocial, legal, police, shelter, disability, and child services.	Before each district rollout; verify every six months	Gender and GBV Specialist with district teams	100 percent of active districts have current validated directories	Component 3
A8	Execute referral protocols or agreements where needed and establish safe access support for remote survivors	Before district rollout	CPMU and district government	Protocols operational; gaps and contingencies recorded	Component 3

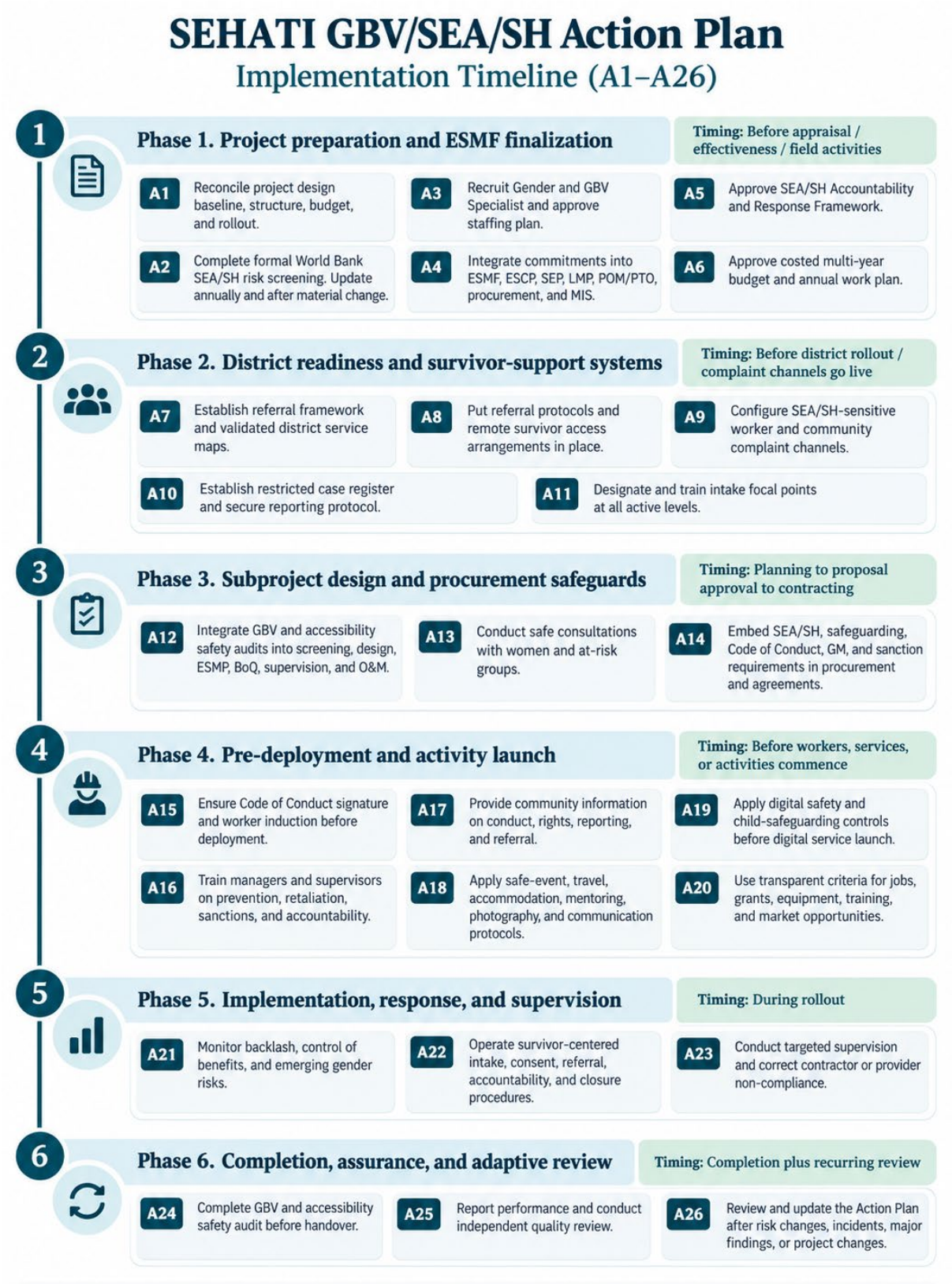
ID	Action	Timing	Responsible	Indicator or Completion Evidence	Budget Source
	consistent with project eligibility.				
A9	Configure multiple SEA/SH-sensitive community and worker complaint channels, including anonymous, low-connectivity, disability-accessible, and direct confidential options.	Before field activities	CPMU GRM Lead and Gender and GBV Specialist	Channels tested and publicly communicated	Component 3 GRM
A10	Create a separate restricted case register, access protocol, retention schedule, secure reporting template, and small-number suppression rules.	Before channels go live	CPMU Gender and GBV Specialist with Data Protection or MIS Lead	Security test and access list approved; no PII in general dashboard	Component 3 MIS and GRM
A11	Designate and train CPIU, PIU, district, worker, and community intake focal points, with safe independent escalation and female representation.	Before each rollout and after turnover	CPMU with CPIUs, PIUs and districts	100 percent of active areas have trained focal points	Component 3 training
A12	Integrate the safety audit into E&S screening, proposal appraisal, design, BoQ, ESMP, supervision, commissioning, and O&M.	Before proposal approval	CPMU E&S Lead and technical PIUs	100 percent of applicable subprojects screened; actions closed before approval	Subproject design and works

ID	Action	Timing	Responsible	Indicator or Completion Evidence	Budget Source
A13	Use safe consultations with women and at-risk groups to validate risks, reporting channels, meeting arrangements, infrastructure design, and service pathways.	Planning and at least annually	Facilitators and district focal points	Consultation records show influence on design; no personal disclosures recorded	Components 1 and 2
A14	Include SEA/SH and child-safeguarding requirements, manager duties, individual Codes of Conduct, sanctions, worker GM, training, focal points, and budget in procurement and agreements.	Before solicitation and contract award	Procurement units with E&S team	100 percent of applicable documents include approved clauses	Contract or grant price
A15	Require all project workers to sign the Code of Conduct and complete role-appropriate induction before deployment; maintain training and signature registers.	Before work and refresher at least annually	Employers and providers	100 percent signed and inducted before deployment	Employer or provider contract
A16	Conduct manager and supervisor training on prevention, retaliation, immediate protective measures, fair accountability, sanctions, and documentation.	Before supervision duties and annually	Gender and GBV Specialist	100 percent of designated managers trained; competency check passed	Component 3 and contracts

ID	Action	Timing	Responsible	Indicator or Completion Evidence	Budget Source
A17	Provide accessible community information on expected conduct, rights, channels, confidentiality, referral, and non-retaliation before work, training, or service delivery begins.	Before activity and at key milestones	District teams facilitators contractors and providers	100 percent of active villages receive documented information	Components 1 and 2
A18	Apply safe-event, travel, accommodation, one-to-one mentoring, photography, and digital-communication protocols for training, incubation, market linkage, and field visits.	Before each relevant activity	PIUs and providers	Protocol included in activity plan; incidents and exceptions reviewed	Component 2 and 3
A19	Apply digital-safety and child-safeguarding requirements to connectivity, LMS, e-commerce, beneficiary communications, and online mentoring.	Before service launch	Digital PIU with Gender and GBV Specialist	Safety assessment completed; user reporting and privacy controls operational	Component 2 digital services
A20	Apply transparent and auditable criteria for jobs, grants, equipment, training, asset access, and market opportunities, with separation of duties and	At selection and throughout delivery	PIUs districts and village governments	Published criteria; sampled decisions traceable; complaints analyzed	Components 1 and 2

ID	Action	Timing	Responsible	Indicator or Completion Evidence	Budget Source
	confidential complaints.				
A2 1	Monitor possible backlash and control of benefits through safe qualitative feedback from women, without asking for incident disclosure or collecting sensitive household data unnecessarily.	During rollout and use	MEL team with Gender and GBV Specialist	Findings inform adaptive measures and are reported without PII	Component 3 MEL
A2 2	Operate the intake, consent, referral, project-linkage, notification, employer-accountability, survivor-feedback, and closure process in Section 7.	Continuous	Authorized focal points and employers	All allegations handled within protocol; timeliness reported in aggregate	GRM and employer resources
A2 3	Conduct targeted supervision of contractors, community works, training providers, tourism activities, and digital services; correct non-compliance and apply contractual remedies.	Monthly or risk-based	PIUs district E&S teams and supervision consultants	Findings closed within agreed deadlines; repeat breaches escalated	Contracts and Component 3
A2 4	Complete a GBV and accessibility safety audit at commissioning and confirm residual	Before completion acceptance	Technical PIU district and village operator	100 percent of applicable assets pass completion audit	Subproject completion

ID	Action	Timing	Responsible	Indicator or Completion Evidence	Budget Source
	measures, complaint information, and O&M responsibilities before handover.				
A25	Report implementation performance quarterly and conduct an annual independent or third-party quality review of the SEA/SH system, including service pathways and data protection.	Quarterly and annually	CPMU	Reports submitted; corrective actions tracked	Component 3 monitoring
A26	Review this Plan after formal risk rating, before mid-term review, after serious incidents or systemic findings, and when project scope or locations change.	Risk-triggered and at least annually	CPMU with World Bank review as applicable	Version history and consultation record maintained	Component 3



10. Monitoring, Reporting, and Adaptive Management

Domain	Indicator	Target
Risk assessment	SEA/SH risk rating completed and current	Approved at finalization; reviewed at least annually and after material change
District readiness	Active districts with validated referral directory, trained focal points, tested channels, and secure data arrangement	100 percent before rollout
Contract readiness	Applicable procurement documents and agreements containing approved SEA/SH clauses and priced measures	100 percent
Worker readiness	Project workers with signed Code of Conduct and completed induction before deployment	100 percent
Manager readiness	Designated managers and supervisors completing specialized accountability and retaliation training	100 percent before assuming duties
Community awareness	Active villages where women and men can identify at least one safe reporting channel	Target set after baseline; measured without soliciting disclosures
Safety integration	Applicable subprojects with safety audit completed and required measures included in design, BoQ, and O&M	100 percent before approval and before handover
Referral quality	SEA/SH allegations for which referral was offered promptly and consent was documented	100 percent, reported in aggregate
Notification	Project-related allegations notified within ESCP requirements and without identifying data	100 percent
Corrective action	SEA/SH system non-compliance findings closed within agreed time	100 percent or escalated with approved action

Domain	Indicator	Target
Meaningful participation	Sampled investment plans showing that priorities identified by women affected final decisions	Target set in results framework after methodology is approved
Data protection	Unauthorized access or inclusion of sensitive case data in the general MIS	Zero tolerance; every event investigated and remediated

10.1. Reporting Products

Monthly contractor and provider compliance reports to the responsible PIU, covering staffing, Codes of Conduct, training, awareness, supervision, and corrective actions.

Quarterly CPMU E&S report to project management and the World Bank, including system readiness, aggregated complaint categories and timeliness, referrals offered, project linkage, contractual actions, and outstanding risks without identifying information.

Immediate secure incident notification according to the ESCP and applicable World Bank incident-reporting protocol.

Annual risk and service-pathway review using implementation evidence, safe stakeholder feedback, staffing and budget performance, and lessons from complaints and supervision.

10.2. Evaluation and Learning

The mid-term review shall assess whether women can influence investment decisions, safely access project opportunities, retain meaningful control over benefits, and use trusted complaint channels. It shall examine differential outcomes by sex, age, disability, region, Indigenous status where appropriate and safe, and worker category. Research or surveys about violence shall not be added to routine project monitoring without ethical review, specialist methods, referral safeguards, enumerator training, and a clear justification.

11. Resourcing and Budget Framework

SEA/SH prevention and response require a ring-fenced, cost budget. The final amount shall be based on the risk rating, rollout schedule, service gaps, staffing workload, geographic accessibility, and procurement arrangements. Costs shall be included in Component 3 and, where directly attributable, in subproject, contractor, consultant, training-provider, and digital-service budgets. Activities shall not be assigned as no-cost responsibilities when they require time, travel, communication, secure systems, or specialist skills.

Budget Line	Cost Elements	Likely Source	Finalization Action
Specialist staffing	National Gender and GBV Specialist; regional or district capacity based on workload; surge or independent expertise	Component 3 personnel and technical assistance	Cost before effectiveness
Risk assessment and updates	Screening workshops, safe consultations, local analysis, annual updates	Component 3 E&S	Cost annually
Service mapping and referral	Verification, agreements, directory updates, provider capacity support, safe access or transport where eligible	Component 3 and agreements	Cost by rollout wave
Training	Induction, manager modules, focal-point skills, refresher training, competency checks	Component 3 and provider contracts	Cost by worker and focal-point volume
Community communication	Local language materials, disability-accessible formats, separate sessions, low-connectivity communication	Components 1 to 3	Cost by village and activity
GRM and data protection	Channels, trained operators, secure case register, cyber security, translation, audit and maintenance	Component 3 GRM and MIS	Cost before launch and annually
Safety audit and design	Consultation, technical review, lighting, locks, accessibility, safe transport and other design controls	Subproject design BoQ and O&M	Include in investment cost
Monitoring and assurance	Risk-based supervision, third-party review, spot checks, annual system audit, corrective actions	Component 3 and contracts	Cost annually
Contingency	Urgent technical support, service-pathway failure, incident surge, emergency communication or safe-access measures within project eligibility	Component 3 contingency	Approve rules and ceiling

12. Finalization, Disclosure, and Updating

Complete the formal SEA/SH risk rating and adjust measures to the confirmed level of risk.

Reconcile project title, components, sub-components, budgets, implementing units, digital activities, geographic rollout, and results indicators across all controlled documents.

Validate the Plan through safe consultation with women and youth groups, persons with disabilities, Indigenous representatives, worker representatives, facilitators, BUM Desa, contractors, KemenPPPA, Dinas PPPA and UPTD PPA, health and legal providers, and relevant civil society organizations.

Insert approved complaint channels, named institutional functions, notification timeframes, referral protocols, staffing structure, cost budget, and version-control information.

Disclose the final Plan in Bahasa Indonesia and an accessible English version. Provide local-language or accessible communication products where required, without disclosing confidential service or survivor information.

Review the Plan at least annually, before mid-term review, after serious incidents or systemic failures, and whenever new activities, locations, technologies, labor arrangements, or service gaps materially change risk.

Appendix A. SEA/SH Risk Screening Questions

These questions supplement the applicable World Bank tool and do not replace it. Findings shall be recorded with evidence, risk significance, required action, owner, deadline, and clearance decision.

Domain	Minimum Question
Project context	Are GBV, child marriage, trafficking, workplace harassment, or technology-facilitated violence prevalent or normalized? What prevents reporting? Which groups face additional barriers?
Location and access	Is the site remote, conflict-affected, disaster-prone, poorly lit, isolated, or reached through unsafe routes? Will workers or participants travel or stay overnight?
Workforce	How many direct, contracted, community, and supply workers will be engaged? Are external workers, accommodation, night shifts, or informal recruitment expected?
Power over benefits	Who controls jobs, wages, grants, equipment, training, certification, land approvals, market access, and complaints? Are decisions transparent and separated?

Domain	Minimum Question
Women and girls	Could increased income, assets, voice, mobility, tourism, or digital access lead to backlash, intimate partner violence, or social sanctions?
Children	Will activities, workers, tourism, internet services, homestays, or facilities create contact with children or expose children to online or offline exploitation?
Service capacity	Are confidential, competent, affordable, child-friendly, disability-accessible, and geographically reachable services available? Are referral pathways tested?
Grievance capacity	Are there trusted confidential channels, trained focal points, safe escalation outside the alleged perpetrator's authority, and secure data arrangements?
Contractor capacity	Does the employer have qualified staff, Codes of Conduct, training, worker GM, sanctions, supervision, and an adequate budget?
Design safety	Have women and at-risk users identified safety needs related to siting, routes, lighting, privacy, locks, sanitation, operating hours, transport, and accessibility?
Digital safety	Will personal data, images, messaging groups, LMS, e-commerce, mentoring, public lists, or connectivity create harassment, grooming, stalking, or privacy risks?
Residual risk	After controls, can the risk be managed by the proposed capacity? Should the activity be redesigned, delayed, escalated, or excluded?

Appendix B. GBV Service Mapping Template

Complete for every active district before rollout and verify at least every six months. The public directory may contain safe contact information, while internal capacity notes remain restricted.

Field	Information to Verify
Provider identity	Institution, service type, district coverage, address, safe contact person and contact channels
Services	Emergency and clinical health; psychosocial support; case management; shelter or safe accommodation; legal aid; police or justice; child protection; disability support; transport

Field	Information to Verify
Access	Hours, fees, eligibility, languages, disability access, child-friendly capacity, remote outreach, safe transport, tele-service options
Quality and confidentiality	Trained staff, survivor-centered protocol, confidentiality, informed consent, records security, referral follow-up, complaints about service quality
Referral process	Who contacts whom, consent method, information shared, emergency process, after-hours process, acknowledgment and feedback
Capacity gaps	Wait time, staffing, stock or clinical limitations, geographic gaps, legal limitations, reputational or safety concerns
Agreement	MoU or referral protocol, cost responsibilities, data-sharing limits, validity and review date
Verification	Date tested, person verifying, evidence, corrective action, next review date

Appendix C. Gender and Accessibility Safety Audit

Audit Area	Minimum Verification Question
Participation	Were women, girls where appropriate, persons with disabilities, Indigenous users, workers, and other at-risk groups safely consulted without requesting personal disclosure?
Location and routes	Are access routes visible, used, well maintained, accessible, and safe at likely operating times? Are isolated or high-risk areas avoided?
Lighting and visibility	Is lighting adequate at entrances, paths, sanitation, parking, markets, storage, water points, and waiting areas? Are sightlines clear without compromising privacy?
Sanitation and privacy	Are facilities sex-separated where appropriate, accessible, internally lockable, safely located, maintained, and supplied for menstrual hygiene?
Work sites	Are boundaries, signage, access control, worker facilities, working hours, transport, accommodation, emergency contacts, and community interfaces safe?

Audit Area	Minimum Verification Question
Training and events	Are venue, schedule, travel, accommodation, one-to-one meetings, childcare, photography, and focal points designed to reduce risk?
Economic benefits	Are criteria public, decisions traceable, approvals separated, fees clear, and access arrangements protected from gatekeeper abuse?
Tourism and homestay	Are child-safe tourism, guest conduct, worker safety, reporting information, staff screening, and visitor-management measures present?
Digital safety	Are privacy settings, consent for data and images, moderator duties, reporting tools, blocking, account security, and child safeguards in place?
Emergency and complaints	Are confidential channels visible but discreet, accessible, tested, and connected to verified services?
O&M	Who maintains lighting, locks, sanitation, accessibility, signage, channels, and safety measures? Is a budget assigned?
Decision	List required design changes, responsible party, budget, deadline, verification evidence, and clearance status.

Appendix D. Minimum Code of Conduct Requirements

Every applicable institutional, manager, and individual Code of Conduct shall be written in a language understood by the signatory and shall define at least the following obligations:

Treat all people with dignity and respect and do not discriminate or retaliate.

Do not engage in sexual exploitation, sexual abuse, sexual harassment, grooming, stalking, sexualized bullying, or technology-facilitated sexual misconduct.

Do not request or accept sex, sexual contact, sexual images, or sexual favors in exchange for jobs, wages, grants, equipment, training, certification, approvals, information, services, contracts, or any project benefit.

Do not engage in sexual activity with anyone under 18. Mistaken belief about age or claimed consent is not a defense under the project Code of Conduct.

Do not buy sexual services or engage in transactional sex in connection with project work, travel, accommodation, worksites, or communities served by the project.

Do not photograph, record, share, display, or transmit sexual content, intimate images, or personal information without lawful and informed consent. Never use project devices or platforms to exploit or harass.

Use respectful and professional conduct during field visits, one-to-one meetings, transport, training, online communication, and community engagement.

Complete required induction and refresher training; cooperate with lawful and fair employer processes; and comply with safety measures.

Report observed or suspected breaches through designated channels while protecting confidentiality and avoiding rumor, retaliation, or independent investigation.

Understand that violations may result in removal from site, disciplinary action, termination, contractual remedies, and referral to competent authorities consistent with law and due process.

The Code shall identify safe reporting channels, the employer focal point, the worker GM, community GM access, confidentiality limits, prohibition of retaliation, signature and date, manager acknowledgment, and consequences for non-compliance.

Appendix E. Minimum SEA/SH Intake and Referral Record

This record is completed only by authorized trained personnel and stored in the restricted case system. The general GRM receives only a coded reference and non-identifying status.

Field	Data Minimization Rule
Coded case ID	Generated without initials, village name, phone number, or other identifiers
Date and safe channel	Date received and method; do not record unnecessary location detail
Nature of allegation	Complainant's own words in a brief non-leading summary; no detailed chronology
Possible project link	Yes, no, or unclear; basis limited to association with project worker, activity, site, resource, or authority
Age and sex	Only if voluntarily provided or already known; record broad age category where feasible
Immediate safety or health need	Yes, no, or unclear; action taken with consent
Referral	Services offered; survivor's consent or preference; safe contact method; do not store provider clinical notes
Information sharing consent	What may be shared, with whom, for what purpose, and when consent was obtained

Field	Data Minimization Rule
Required notification	Coded date and recipient under ESCP protocol; no identifying data
Project action status	Employer or contractual action status without detailed evidence or confidential personnel information
Survivor communication	Preferred safe method and dates of updates
Closure	Referral offered; project action completed or documented; closure date and reason

Appendix F. Minimum Training Framework

Audience	Minimum Content	Timing
All project workers	Conduct standards, definitions and examples, power and consent, child prohibition, reporting channels, non-retaliation, sanctions, community respect	Before deployment; refresher annually and after major change
Managers and supervisors	Duties to prevent, supervise and act; safe interim measures; conflicts of interest; fair employer review; sanctions; documentation; retaliation	Before assuming duties; annual refresher
Complaint intake focal points	Trauma-informed listening, consent, confidentiality limits, minimal data, child and disability protocol, warm referral, secure escalation, self-care	Before channel activation; supervised practice and periodic drills
E&S and technical staff	Risk screening, safety audit, design and BoQ integration, contractor supervision, corrective actions, completion audit	Before appraisal duties; refresher by risk
Facilitators and village actors	Safe participation, backlash awareness, respectful meetings, community information, referral boundaries, no investigation or public disclosure	Before village mobilization; refresher annually
Training mentors and market partners	Provider Code, one-to-one and digital protocols, travel and accommodation, reporting, sanctions	Before service delivery
MIS MEL and GRM staff	Data minimization, role-based access, small-number suppression, secure reporting, ethical measurement, breach response	Before system access; annual cyber and privacy refresher

Appendix G. Outline Terms of Reference for the Gender and GBV Specialist

Objective

Provide specialist leadership so that SEHATI prevents and responds to project-related GBV and SEA/SH in accordance with the World Bank ESF, applicable guidance, Indonesian law, and the approved project instruments.

Key Tasks

- Lead the SEA/SH risk assessment, periodic re-screening, and update of this Action Plan.
- Integrate measures into the ESMF, ESCP, SEF, LMP, POM, PTO, procurement, contracts, screening, ESMPs, MIS specifications, and results framework.
- Develop and quality-assure Codes of Conduct, training, safety-audit, community-information, referral, intake, data-protection, and accountability tools.
- Lead service mapping and coordination with KemenPPPA, Dinas PPPA, UPTD PPA, health, psychosocial, legal, justice, disability, child-protection, and civil society providers.
- Build capacity of CPIU, PIU, district, facilitator, contractor, provider, GRM, MEL, and MIS personnel.
- Provide technical oversight of the SEA/SH-sensitive grievance pathway, ensuring safe referral, minimum data, secure notification, and separation from investigations.
- Review contractor and provider compliance; advise on corrective actions and systemic risk escalation.
- Prepare non-identifying quarterly reports and an annual risk and system-quality review.
- Support safe stakeholder consultations and ensure that feedback changes project design and implementation where appropriate.

Minimum Qualifications

- Advanced degree in gender studies, social sciences, public health, law, social work, psychology, development studies, or a related discipline, or equivalent relevant professional experience.
- At least ten years of relevant experience, including substantial experience in GBV prevention and response, survivor-centered systems, rural or decentralized programs, and institutional capacity building.
- Demonstrated knowledge of SEA/SH risk management in development projects, grievance mechanisms, service referral, Codes of Conduct, training, data protection, and contractor accountability.
- Knowledge of Indonesia's protection and service systems and ability to work with government, civil society, service providers, workers, and communities across diverse regions.
- Strong judgment on confidentiality, ethics, child safeguarding, disability inclusion, and do-no-harm practice; excellent Bahasa Indonesia and working English.

Required Deliverables

Timing	Deliverable
Inception	Work plan, stakeholder map, data-gap register, staffing and capacity assessment

Timing	Deliverable
Before field rollout	Completed risk rating, final Action Plan, Accountability and Response Framework, referral framework, complaint protocol, training package, safety audit, Code of Conduct package, and budget
Quarterly	Non-identifying implementation and risk report, contractor or provider compliance summary, corrective-action tracker
Annually	Updated risk assessment, service mapping, training and capacity plan, budget proposal, and system-quality review
Event driven	Technical advice and updates after serious incidents, material project changes, service failure, or systemic findings

References

Government of Indonesia. Project Appraisal Document, Strengthening Community Resilience and Sustainable Economic Development in Rural Indonesia, P515935, draft dated 26 August 2026.

Government of Indonesia. Readiness Criteria Proyek SEHATI, draft dated October 2026.

Government of Papua New Guinea. Rural Services Delivery Project Phase 2, ESMF Annex 6, Gender-Based Violence Prevention and Response Action Plan, 2026.

World Bank. Environmental and Social Framework, including ESS1, ESS2, ESS4, and ESS10.

World Bank. Addressing Sexual Exploitation and Abuse and Sexual Harassment in Investment Project Financing involving Major Civil Works: Good Practice Note, 2025.

World Bank. Addressing Sexual Exploitation and Abuse and Sexual Harassment in Human Development Operations: Good Practice Note, 2022.

World Bank. Environmental and Social Management Framework Template for Low to Moderate Risk Projects and accompanying annex templates, April 2023. Used as a structural reference only; SEHATI is classified as Substantial overall E&S risk.

Government of Indonesia. Law No. 12/2022 on Sexual Violence Crimes.

Government of Indonesia. Government Regulation No. 27/2024 on Coordination and Monitoring of Prevention and Handling of Victims of Sexual Violence Crimes.

Government of Indonesia. Presidential Regulation No. 55/2024 on Regional Technical Implementation Units for the Protection of Women and Children.

Government of Indonesia. Presidential Regulation No. 98/2024 on Integrated Services for Handling, Protection, and Recovery in Sexual Violence Crimes by the Central Government.

Government of Indonesia. Government Regulation No. 30/2025 on Prevention of Sexual Violence Crimes and Handling, Protection, and Recovery of Victims.

Government of Indonesia. Minister of Women's Empowerment and Child Protection Regulation No. 2/2022 on Standards for Women and Child Protection Services.

Government of Indonesia. Minister of Manpower Decree No. 88/2023 on Guidelines for Preventing and Handling Sexual Violence in the Workplace.

Ministry of Women's Empowerment and Child Protection and Statistics Indonesia. National Women's Life Experience Survey 2024 and related official reporting.

Indonesia Disaster Resilience Initiatives Project. ESMF Volume 2, Annex 11, Project Strategy and Action Plan for SEA and Violence Against Children.

ANNEX XI: Indigenous Peoples Planning Framework

Indigenous Peoples Planning Framework (IPPF)

Strengthening Food Security and Green Economy Development in Indonesia's Village (SEHATI)
Project ID: P515935
Draft – Integrated Annex/Chapter of the ESMF

Purpose. This simplified IPPF establishes the principles and procedures for identifying and engaging *Masyarakat Adat* who meet the criteria of ESS7 and for managing potential risks and impacts where such communities are present in SEHATI locations.[1] SEHATI is not specifically targeted to *Masyarakat Adat*; the framework is intended to ensure that eligible *Masyarakat Adat* are not excluded from village planning, project benefits, decision-making, implementation, grievance arrangements, or monitoring. This IPPF only applies when *Masyarakat Adat* have existed and identified in the targeted and selected villages.

1. Context and Approach

SEHATI will support decentralized, demand-driven village investments. Participating villages and specific activities are identified through the project planning and proposal process. Indigenous Peoples (*Masyarakat Adat*) may be present in some participating areas. Accordingly, ESS7 screening will be embedded in proposal development so that presence and potential impacts are identified before an activity is approved.

- The Project does not designate *Masyarakat Adat* as the sole or specific target group.
- Where Masyarakat Adat meeting ESS7 criteria are present, the Project will provide culturally appropriate opportunities to participate from proposal planning through implementation and monitoring.
- Engagement will be meaningful, inclusive, culturally appropriate, and documented.
- Potential impacts on customary land, natural resources, livelihoods, cultural practices, and access to benefits will be assessed and addressed.
- Site-specific IPP or integrated measures will be prepared where required; FPIC will be obtained only in circumstances where ESS7 requires it.

2. Objectives and Principles

- Respect the dignity, aspirations, identity, culture, knowledge, practices, and natural resource-based livelihoods of *Masyarakat Adat*.
- Avoid adverse impacts where feasible and apply proportionate measures where avoidance is not possible.
- Support equitable and culturally appropriate access to SEHATI benefits and opportunities.
- Enable meaningful participation in village planning, beneficiary selection, implementation, and monitoring.
- Provide accessible and culturally appropriate channels for feedback and grievances.
- Apply requirements proportionately to the nature and scale of the relevant activity and its risks and impacts.

3. Identification and ESS7 Screening

The ESS7 screening trigger will form part of the village proposal preparation and E&S screening process. Screening is intended to determine whether Masyarakat Adat meeting ESS7 criteria are present or have collective attachment to the area of the proposed activity and whether the activity could affect their rights, land or natural resources, livelihoods, cultural practices, or access to project benefits.

Stage	Minimum IPPF Action	Output
Village planning / proposal preparation	Identify whether Masyarakat Adat may be present or collectively attached to the activity area; consult available local information and communities.	IP screening section in proposal/E&S form.
E&S screening and district verification	Confirm whether identified groups meet ESS7 criteria and screen possible impacts and benefit-access issues.	Screening finding and verification record.
Activity design	Where ESS7 applies, undertake culturally appropriate engagement and define avoidance, mitigation and inclusion measures.	Measures integrated in design or site-specific instrument.
Before activity approval / commencement	Complete required IPP/integrated measures and, where ESS7 requires, FPIC process and documentation.	Approved measures/IPP and FPIC documentation where applicable.

4. Meaningful and Inclusive Engagement

Where *Masyarakat Adat* are present, engagement will begin during proposal planning and continue, as relevant, through design, implementation, monitoring, and completion. The approach should be adapted to the community context rather than relying only on general village consultations.

- Use culturally appropriate methods, accessible information, and local languages or other suitable communication methods where needed.
- Engage representative institutions and customary leaders while providing opportunities for women, youth, persons with disabilities, and other less influential community members to participate.
- Provide information early enough for informed discussion of the proposed activity, potential benefits and risks, alternatives, and mitigation measures.
- Document key issues raised, agreed actions, and how consultation influenced the proposal or activity design.
- Maintain engagement where implementation changes may affect *Masyarakat Adat*.

5. Inclusion in Project Benefits

Where *Masyarakat Adat* are among the affected or beneficiary communities, proposal development and implementation will consider barriers that could limit participation or access to benefits. Appropriate measures may be integrated into the activity design to support equitable and culturally appropriate access. These measures should be based on screening and consultation findings rather than predetermined benefit quotas.

6. Management of Risks and Impacts

Screening and consultation will assess potential impacts on customary land and natural resources, livelihoods, cultural practices, community access, and distribution of project benefits. The preferred approach is to avoid adverse impacts. Where impacts cannot be avoided, proportionate mitigation measures will be agreed through meaningful consultation and incorporated into the relevant village-level E&S instrument, IPP, or integrated measures.

7. Site-Specific IPP or Integrated Measures

A standalone site-specific *Masyarakat Adat* Plan is not automatic. Based on screening and assessment, required ESS7 measures may be integrated into the village proposal, ESMP or other activity-level instrument where this provides a clear and effective mechanism. A dedicated IPP should be prepared where the nature or significance of the issues warrants a distinct plan.

- summary of screening and relevant social assessment findings;
- summary and documentation of meaningful consultation;
- measures to avoid or mitigate adverse impacts and promote culturally appropriate access to benefits;
- implementation responsibilities, timing, and resources;
- accessible grievance arrangements; and
- monitoring indicators and follow-up actions.

8. Free, Prior and Informed Consent (FPIC)

FPIC is not required merely because *Masyarakat Adat* are present in a participating village. Where screening indicates circumstances for which ESS7 requires FPIC, the Project will undertake and document a culturally appropriate FPIC process before the relevant activity proceeds. Activities that cannot meet applicable ESS7 requirements will not proceed in their proposed form and will need to be redesigned, relocated, or excluded, as applicable.

9. Feedback and Grievance Arrangements

Masyarakat Adat will have access to the Project grievance mechanism. Where needed, access arrangements will be adapted to language, customary communication practices, accessibility needs, confidentiality, and physical access. Use of customary mechanisms may complement, but should not prevent access to, Project grievance channels.

10. Institutional Arrangements and Capacity Building

Village governments will apply the screening requirements during proposal development, with district-level verification and E&S support. The CPMU/PIUs will provide technical guidance, templates,

training, oversight, and monitoring consistent with the ESMF and ESCP. Training should cover ESS7 identification, culturally appropriate engagement, documentation, grievance accessibility, site-specific measures, and FPIC triggers.

11. Monitoring and Reporting

- number/status of proposals screened for potential ESS7 applicability;
- screening outcomes and required follow-up measures;
- consultations undertaken and key issues/action follow-up;
- implementation status of IPPs or integrated ESS7 measures where required;
- FPIC processes where required;
- access to benefits and identified participation barriers; and
- ESS7-related grievances and resolution status, without disclosure of confidential personal information.

12. Simple Screening Questions for Village Proposals

☐ Yes ☐ No ☐ To be verified Are Masyarakat Adat/customary communities reported to be present in, use, or have collective attachment to the proposed activity area?

☐ Yes ☐ No ☐ To be verified Could the proposed activity affect customary land, territories, natural resources, access, livelihoods, cultural practices, or places/resources of cultural significance?

☐ Yes ☐ No ☐ To be verified Could *Masyarakat Adat* face barriers to participating in village planning, beneficiary selection, implementation, or access to project benefits?

☐ Yes ☐ No ☐ To be verified Have potentially affected *Masyarakat Adat* been consulted through culturally appropriate methods during proposal preparation?

☐ Yes ☐ No ☐ To be verified Does the screening indicate that an IPP/integrated ESS7 measures or further assessment is required?

☐ Yes ☐ No ☐ To be verified Could the activity involve circumstances requiring FPIC under ESS7?

13. Relationship with Other SEHATI Instruments

This IPPF is implemented together with the ESMF, Stakeholder Engagement Framework (SEF), Land Access Procedures (LAP), Environmental and Social Commitment Plan (ESCP), village-level E&S screening and management instruments, technical guidelines, and Project grievance arrangements. Where requirements overlap, the more specific activity-level measures identified through screening and consultation should be reflected in the relevant proposal and management instrument.

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[1] According to Law No. 32/2009 concerning Environmental Protection and Management, *Masyarakat Hukum Adat* are groups of people who have resided in a specific geographical area for generations due to ancestral ties, maintain a strong relationship with the environment, and possess a value system that determines their economic, political, social, and legal institutions. However, this simplified IPPF use Masyarakat Adat as a broader umbrella term that includes both formal "Masyarakat Hukum Adat" (MHA) and/or other traditional communities. To gain official recognition and secure their rights as a customary law community, an MHA needs to obtain recognition and protection established through a Regional Head Decree (Regent/Mayor Decree). In certain contexts or regions, this recognition is also reinforced through a Regional Regulation (Perda) enacted jointly with the Regional House of Representatives (DPRD).